

uniden's  
two way sport radios

# frs

## 500



- family radio service (FRS)
- up to 2 mile range
- no subscription cost
- crystal clear reception

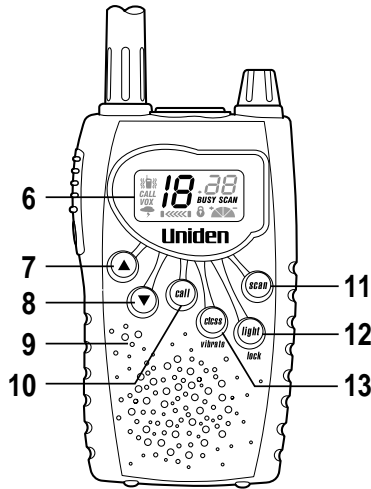
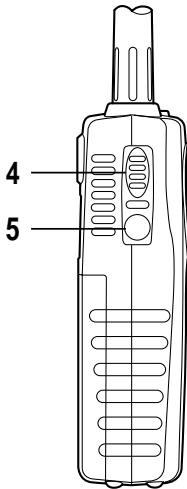
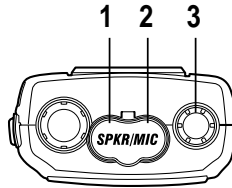
## Reference Guide



A World Without Wires

**Uniden**<sup>®</sup>

# Controls



- 1 Speaker jack
- 2 Microphone jack
- 3 **on/off volume**
- 4 **PTT** button
- 5 **MON** button
- 6 LCD
- 7 **up** button

- 8 **down** button
- 9 Microphone
- 10 **call** button
- 11 **scan** button
- 12 **light/lock** button
- 13 **ctcss/vibrate** button

## FCC Information

**Important:** Changes or modifications to this unit not expressly approved by Uniden could void your authority to operate this unit. Do not open your radio to make any internal adjustments. Your radio is set up to transmit a regulated signal on an assigned frequency. It is against the law to alter or adjust the settings inside the radio to exceed those limitations. Any adjustments to your radio must be made by qualified technicians using the proper test equipment. To be safe and sure:

- Never open your radio's case.
- Never change or replace anything in your radio except the batteries.

Your radio might cause TV or radio interference even when it is operating properly. To determine whether your radio is causing the interference, turn it off. If the interference goes away, your radio is causing it. Try to eliminate the interference by moving your radio away from the receiver. If you cannot eliminate the interference, the FCC requires that you stop using the radio.

**Audio Accessories:** Do not operate the radio with audio accessories at high volume levels. Hearing experts advise against continuous high volume operation. If you experience a ringing in your ears, reduce the volume level or discontinue use. Always make sure the radio is turned off before plugging audio accessories into the accessory jack.



Do not operate the radio in hazardous environments. Explosion or fire may result. Do not operate the radio near unshielded electrical blasting caps. Under certain conditions, radios can interfere with blasting operations and may cause an explosion. Turn your radio OFF to prevent accidental transmission when in a blasting area or in areas posted: "Turn off two-way radio." Construction crews often use remote control RF devices to set off explosives.

**Care and Safety:** To clean the radio, use a soft cloth dampened with water. Do not use cleaners or solvents because they can harm the body of the unit and leak inside, causing permanent damage. Use a dry, lint-free cloth to clean the battery contacts.

This device complies with Part 15 of the FCC Rules.



Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

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## Welcome

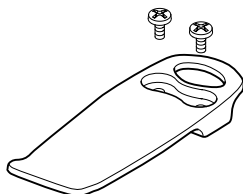
Congratulations on your purchase of the Uniden FRS500 family radio. This product is a lightweight, palm-sized radio you can carry almost anywhere. Use it at shopping malls, amusement parks, or sporting events to stay in contact with family and friends, or in a neighborhood watch for vital communications. This compact, state-of-the-art device is equipped with the following features:

- 14 Preprogrammed Channels
- Up to 2 mile range\*
- LCD Display
- Tone/Vibration Alert for incoming calls
- Channel Scan
- Keypad Lock
- 50 hours of operation
- Low Battery Level Indicator
- LCD Backlit
- 38 Built-in CTCSS Codes
- Silent Keypad
- External Speaker and Microphone Capable

*\* Range may vary depending on environmental and/or topographical conditions.*

## Included in Your Package

Your package contains the FRS500, this reference guide, and the accompanying belt clip with hardware. You will need to purchase three (3) AA ALKALINE batteries in order to operate the unit. If any of these items are missing or damaged, contact the Uniden Parts Department at (800) 554-3988 M-F: 7:00 AM-5:00 PM CST.



Belt clip and screws



FRS Unit

## Battery Installation

Your FRS500 radio uses three (3) AA ALKALINE batteries for power.

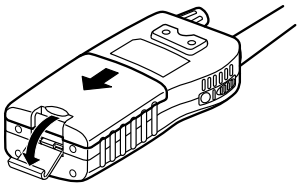
To install the batteries:

1. Make sure your radio is off.

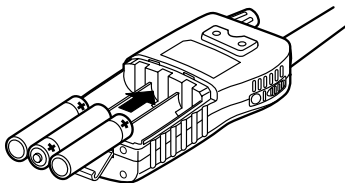


*Do not mix old and new batteries to avoid damage to the unit.*

2. Release the battery cover clip, then remove the battery cover.

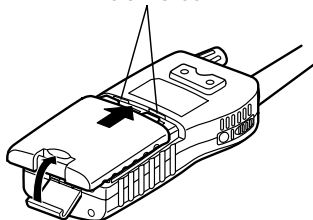


3. Insert three (3) AA ALKALINE batteries according to the polarity symbols on the inside of the battery compartment.





4. Align the battery cover tabs with the FRS500 tab holes then replace the cover.

Tab holes



## Low Battery Alert

The LCD on your radio shows a battery meter in the lower right corner. The  icon indicates a fully powered unit. As the batteries become low,  will flash.



When the batteries in the unit are low, the unit will go into a Battery Low/Sleep Mode. The Scan Mode, Transmit, Transmit Call Tone Mode, CTCSS Tone Setting Mode, and Vibration are disabled. Replace the batteries immediately to continue using the radio.

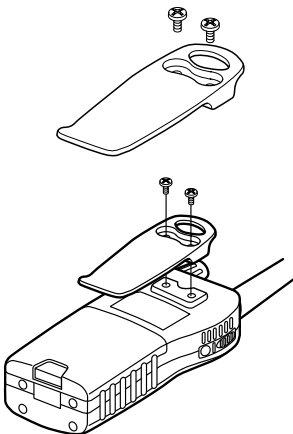
## Belt Clip

Because you will most likely use your radio when you are out and about, the unit comes equipped with a belt clip to fasten the unit to your belt, pocket, or purse.

To remove the belt clip, turn the screws counterclockwise.

To attach the belt clip:

1. Insert the belt clip screws into the slot on the belt clip.
2. Align the screws with the holes on the back of the radio and turn them clockwise, using a Phillips screwdriver to secure the belt clip. Do not over-tighten.



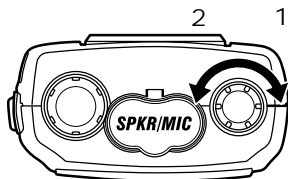


## Using Your Radio

To get the most out of your new radio, read this reference guide completely before attempting to operate the unit.

### Turning the Radio On

1. Turn the **on/off volume** control clockwise to turn the unit on.

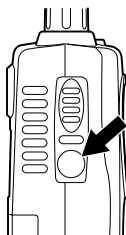


*When you turn on your FRS500, the LCD backlight remains lit for 5 seconds.*

2. Turn the control counterclockwise to turn the unit off.

### Adjusting the Volume

1. Press the **MON** button to hear background noise. The “BUSY” icon and <<<<<<■ icon appear.
2. Turn the **on/off volume** control clockwise to increase the volume and counterclockwise to decrease the volume.



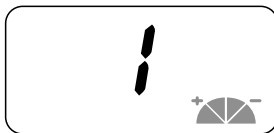
*You may need to adjust the volume again when audio is heard from the speaker.*

## Choosing a Channel and CTCSS

Your radio has 14 channels and a Continuous Tone Coded Squelch System (CTCSS) that you can use to talk to others. You can only communicate with radios that are set on the same channel and CTCSS tone code. A CTCSS tone is subaudible and selectable from the 38 standard tone frequencies. You must select the same channel as your party selected.

To choose a channel for the FRS500:

Press the **up** or **down** button repeatedly to select one of the 14 channels. (The number on the LCD changes to indicate that a new channel has been selected.)



*The BUSY icon and <<<<■ icon appear while receiving a transmission.*

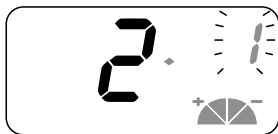
To choose a CTCSS code for the FRS500:

You may want to hear calls from specific persons in your group. The CTCSS code that you enter allows you to block other calls and only receive from those who are using the same channel and CTCSS code.



*This feature does not cause your conversation to be private. Anyone else on the channel will be able to listen. It only relieves you of listening to unwanted conversations.*

1. Press the **ctcss/vibrate** button.  
The code indicator flashes.

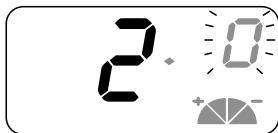


2. Press the **up** or **down** button repeatedly to select one of the CTCSS codes (0-38).
3. After selecting the desired CTCSS code, press the **ctcss/vibrate** button again. The code indicator stops flashing.



*You must press the **ctcss/vibrate** button within 5 seconds or the unit will time out. If not, the setting will not be made.*

4. To turn off the CTCSS code, press the **up** or **down** button until the code **0** is selected. Then press the **ctcss/vibrate** button again. The code indicator stops flashing.



*If the code **0** is selected on your radio, you can receive any signal on that channel regardless of the CTCSS code settings of the people in your party.*

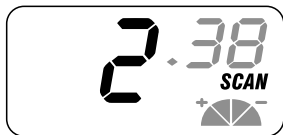
## Scan Mode

Your radio also allows you to scan for activity from other transmitting radios regardless of the channel and code setting.

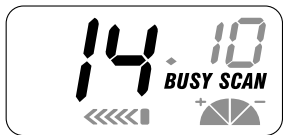
Make sure all of your CTCSS codes are set to “0” prior to scanning. Otherwise, during a scan cycle, your radio will only check for that specific channel and code combination.

To use the Scan feature:

1. Press the **scan** button to begin scanning channels. The LCD will indicate that you are in scan mode.



If a signal is present, the radio will stop on the active channel. It will remain on the channel until the transmission ends. After 2 seconds, it will resume scanning.



2. To resume scanning prior to the transmission end, press **scan** again.
3. Press the **scan**, **call**, **PTT**, **up**, or **down** button to exit the scan mode, stopping at the current channel.



*If pressing **scan** to exit the scan mode, the radio must be actively scanning.*

## *Monitor Mode*


The Monitor Mode is used to check activity on a specific channel. It will allow you to receive signals that are considered too weak.

To check the channel activity:

1. Press and hold the **MON** button until you hear a series of beeps. You will hear background noise if the channel is clear. Don't transmit if you hear conversation.
2. To turn Monitor Mode off, press the **MON** button again.

## *Talking on Your Radio*


To talk to others using the radio;

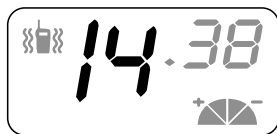
1. Determine your communicating channel and/or code setting with the other members of your party (refer to "Choosing a Channel and CTCSS" on page7).
2. Press and hold the **PTT** button and speak into the microphone. The following LCD screen appears.The image shows a rectangular LCD screen with rounded corners. In the center, there is a thick vertical black bar. To the left of the bar is a signal strength indicator consisting of four horizontal bars of increasing length from left to right. To the right of the bar is a microphone icon with a plus sign on the left and a minus sign on the right.
3. When you finish speaking, release the **PTT** button. You cannot hear any signals while your **PTT** button is pressed.
4. Repeat steps 2 and 3 to continue communication.


## Vibration Alert

Your FRS500 will alert you with a vibration when there is an incoming transmission. You must be on the same channel and code setting as the party with whom you are communicating.

To use the vibration alert:


1. Press and hold the **ctcss/vibrate** button until the  icon appears.

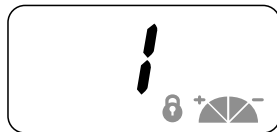


2. You will be alerted with a five second vibration when you receive an incoming call.
3. To turn off the vibration alert, press and hold the **ctcss/vibrate** button again until the  icon goes out.

## Locking In Your Selection

To prevent the channel and code settings from accidentally being changed, you should lock the buttons of your FRS radio. This will disable the **▲**, **▼**, **ctcss/vibrate**, and **scan** buttons.

1. Press and hold the **light/lock** button for two seconds to lock the buttons. The  icon appears on the display indicating the buttons are locked.



2. Press and hold the **light/lock** button again for two seconds to unlock the buttons. Or turn the radio off and then on again to unlock the buttons.



*The call, on/off volume, PTT, MON, and light/lock buttons will not be locked.*

## *Call Tone Transmission*

If you want to contact someone in your party, press the **call** button. "CALL" and the transmit icon appear on the LCD for 2 seconds. Anyone on the same channel and the same CTCSS code will be alerted with your Call Tone.



## *Silent Keypad*

A tone sounds when any button is pressed. This is the initial default setting. This function may be silenced if you wish. To silence the tones, press and hold the **MON** button while you turn on the radio. If you want to hear the tones again, press and hold the **MON** button while you turn on the radio. When the radio is turned off and then on again, the last selected setting remains.



*This function will also silence call tones and error tones.*

## *LCD Backlight*

The LCD display can be illuminated to assist your viewing. Press the **light/lock** button to turn on the display backlight. The light goes off automatically after 5 seconds.

## *External Microphone and Speaker (Optional)*

Available as an optional accessory. Use only an original Uniden speaker/microphone. Use of any other speaker/microphone may void your warranty.

To purchase your external accessory, contact your local Uniden dealer or call Customer Service at (800) 297-1023 Monday through Friday, 7:00 a.m. to 7:00 p.m. Central time.

## Troubleshooting

<b>Problem</b>	<b>Solution</b>
<i>No power</i>	<ul style="list-style-type: none"> <li>• Reposition or replace batteries.</li> </ul>
<i>Message not transmitted</i>	<ul style="list-style-type: none"> <li>• Make sure the <b>PTT</b> button is completely pressed as you transmit.</li> <li>• Reposition or replace batteries.</li> </ul>
<i>Message not received</i>	<ul style="list-style-type: none"> <li>• Confirm radios have the same channel and CTCSS code setting.</li> <li>• Make sure <b>PTT</b> is not inadvertently being pressed.</li> <li>• Reposition or replace batteries.</li> <li>• Obstructions, operating indoors, or in vehicles may interfere with communication. Change your location.</li> <li>• Check to make sure the volume is turned up.</li> </ul>
<i>Hearing other conversations or noise on a channel</i>	<ul style="list-style-type: none"> <li>• Confirm CTCSS code is set.</li> <li>• Shared channel or CTCSS may be in use. Try another channel.</li> </ul>
<i>Limited talk range</i>	<ul style="list-style-type: none"> <li>• Street/concrete structures, heavy foliage, and use in buildings and in vehicles will decrease the range. Check for clear line of sight to improve transmission.</li> <li>• Wearing the radio close to the body, such as in pocket or on a belt will decrease range. Change the location of radio.</li> </ul>
<i>Heavy static or interference</i>	<ul style="list-style-type: none"> <li>• Radios are too close. Radios must be at least 5 feet apart. Increase your distance.</li> <li>• Radios are too far apart. Obstacles interfere with transmission. Talk range is up to 2 miles in clear, unobstructed conditions.</li> </ul>

If after trying these simple steps your unit still does not function properly, call Uniden Customer Service at (800)297-1023 Monday through Friday, 7 a.m. to 7 p.m. Central time.



# Specifications

## Description

Channels	14
Codes	38 STANDARD CTCSS Tone
Operating Frequency	UHF - 462.550 to 467.725 MHz
Talk range	Up to 2 Miles
Power Source	3AA Alkaline Batteries
Transmit Power Out	500m W
Battery Life	50 Hours typ.

## Channel Frequency Chart (MHz)

Channel	Frequency	Channel	Frequency	Channel	Frequency
1	462.5625	6	462.6875	11	467.6375
2	462.5875	7	462.7125	12	467.6625
3	462.6125	8	467.5625	13	467.6875
4	462.6375	9	467.5875	14	467.7125
5	462.6625	10	467.6125		

## CTCSS Chart (Hz)

Channel	Frequency	Channel	Frequency	Channel	Frequency
1	67.0	14	107.2	27	167.9
2	71.9	15	110.9	28	173.8
3	74.4	16	114.8	29	179.9
4	77.0	17	118.8	30	186.2
5	79.7	18	123.0	31	192.8
6	82.5	19	127.3	32	203.5
7	85.4	20	131.8	33	210.7
8	88.5	21	136.5	34	218.1
9	91.5	22	141.3	35	225.7
10	94.8	23	146.2	36	233.6
11	97.4	24	151.4	37	241.8
12	100.0	25	156.7	38	250.3
13	103.5	26	162.2		

## **Appendix - FRS Radio Rules FCC Part 95 Subpart B**

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### **§95.191 (FRS Rule 1)**

#### **Eligibility and responsibility.**

(a) Unless you are a representative of a foreign government, you are authorized by this rule to operate an FCC certified FRS unit in accordance with the rules in this subpart. No license will be issued.

(b) You are responsible for all communications that you make with the FRS unit. You must share each channel with other users. No channel is available for the private or exclusive use of any user.

### **§95.192 (FRS Rule 2)**

#### **Authorized locations.**

(a) Provided that you comply with these rules, you are authorized to operate an FRS unit:

(1) Within or over any area of the world where radio services are regulated by the FCC (this area includes the fifty United States and the District of Columbia, the Commonwealth of Puerto Rico, the United States Virgin Islands (50 islets and cays), American Samoa (seven islands), the Commonwealth of Northern Mariana Islands, and Guam Island);

(2) Within or over any other area of the world, except within or over the territorial limits of areas where radio services are regulated by an agency of the United States other than the FCC or any foreign government (you are subject to its rules);

(3) Aboard any vessel or aircraft registered in the United States, with the permission of the captain, that is within or over any area of the world where radio services are regulated by the FCC or upon or over international waters;

(4) Aboard any unregistered vessel or aircraft owned or operated by a United States citizen or company that is within or over any area of the world where radio services are regulated by the FCC or upon or over international waters.

(5) You must operate the FRS unit only according to any applicable treaty to which the United States is a party. The FCC will make public notice of any such conditions.

(b) [Reserved]

(c) [Reserved]

(d) Anyone intending to operate an FRS unit on the islands of Puerto Rico, Desecheo, Mona, Vieques, and Culebra in a manner that could pose an interference threat to the Arecibo Observatory shall notify the Interference Office, Arecibo Observatory, Post Office Box 995, Arecibo, Puerto Rico 00613, in writing or electronically, of the location of the unit. Operators may wish to consult interference guidelines, which will be provided by Cornell University. Operators who choose to transmit information electronically should e-mail to: [prcz@naic.edu](mailto:prcz@naic.edu).

(1) The notification to the Interference Office, Arecibo Observatory shall be made 45 days prior to commencing operation of the unit. The notification shall state the geographical coordinates of the unit.

(2) After receipt of such notifications, the Commission will allow the Arecibo Observatory a period of 20 days for comments or objections. The operator will be required to make reasonable efforts in order to resolve or mitigate any potential interference problem with the Arecibo Observatory. If the Commission determines that an operator has satisfied its responsibility to make reasonable efforts to protect the Observatory from interference, the unit may be allowed to operate.

### **§95.193 (FRS Rule 3) Types of communications.**

(a) You may use an FRS unit to conduct two-way voice communications with another person. You may use the FRS unit to transmit one-way communications only to establish communications with another person, send an emergency message, provide traveler assistance, make a voice page, or to conduct a brief test.

(b) The FRS unit may transmit tones to make contact or to continue communications with a particular FRS unit. If the tone is audible (more than 300 Hertz), it must last no longer than 15 seconds at one time. If the tone is subaudible (300 Hertz or less), it may be transmitted continuously only while you are talking.

(c) You must not use an FRS unit in connection with any activity which is against federal, state or local law.

(d) You must, at all times and on all channels, give priority to emergency communication messages concerning the immediate safety of life or the immediate protection of property.

(e) No FRS unit may be interconnected to the public switched network.

### **§95.194 (FRS Rule 4) FRS units.**

(a) You may only use an FCC certified FRS unit. (You can identify an FCC certified FRS unit by the label placed on it by the manufacturer.)

(b) You must not make, or have made, any internal modification to an FRS unit. Any internal modification cancels the FCC certification and voids your authority to operate the unit in the FRS.

(c) You may not attach any antenna, power amplifier, or other apparatus to an FRS unit that has not been FCC certified as part of that FRS unit. There are no exceptions to this rule and attaching any such apparatus to a FRS unit cancels the FCC certification and voids everyone's authority to operate the unit in the FRS.

# THANK YOU

FOR PURCHASING A UNIDEN PRODUCT!

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5,199,109	5,408,692	5,428,826	5,438,688	5,448,256	5,465,402
5,471,660	5,483,684	5,548,832	5,551,071	5,642,424	5,710,992
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