



# MIDLAND<sup>®</sup>

## X-TRA TALK

**LXT210/216/303/305/310/350/410/435**

### **Series GMRS/FRS Radio OWNER'S MANUAL**



*[www.midlandradio.com](http://www.midlandradio.com)*

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## Welcome to the world of Midland electronics

Congratulations on your purchase of a high quality MIDLAND product. Your 2-way radio represents the state-of-the-art in high-tech engineering. Designed for GMRS (General Mobile Radio Service) operation, this compact package is big in performance. It is a quality piece of electronic equipment, skillfully constructed with the finest components. The circuitry is all solid-state and mounted on a rugged printed circuit board. Your two-way radio is designed for reliable and trouble-free performance for years to come.

### Features

- 22 GMRS/FRS Channel
- 38 Privacy Codes (LXT310/350/410/435 Series only)
- eVOX (LXT310/350/410/435 Series only)
- Selectable CALL Tone (LXT310/350/410/435 Series only)
- Weather (WX) Band Receiver (LXT310/350/410/435 Series only)
- VIBRATE ALERT (LXT410/435 Series only)
- SCAN Function
- MONITOR Function (LXT310/350/410/435 Series only)
- Roger Beep Tone
- Silent Operation
- Key Pad Lock
- Power High / Power Low Settings
- Speaker / Microphone Jacks
- Battery Low Indicator

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device does not cause harmful interference, and (2) this radio must accept any interference that may cause undesired operation.

To maintain compliance with FCC's RF exposure guidelines, for body-worn operation, this radio has been tested and meets the FCC RF exposure guidelines when used with Midland Radio Corp. accessories supplied or designated for this product. Use of other accessories may not ensure compliance with FCC RF exposure guidelines. (Tested with Headset Model: AVP-1)

## **IMPORTANT NOTICE, FCC LICENSE REQUIRED FOR GMRS OPERATION**

The LXT210/216/303/305/310/350/410/435 Series operates on GMRS (General Mobile Radio Service) frequencies which require an FCC (Federal Communications Commission) license. You must be licensed prior to operating on channels 1 - 7 or 15 - 22, which comprise the GMRS channels of the LXT210/216/303/305/310/350/410/435 Series. Serious penalties could result for unlicensed use of GMRS channels, in violation of FCC rules, as stipulated in the Communications Act's Sections 501 and 502 (amended).

You will be issued a call sign by the FCC which should be used for station identification when operating the radio on GMRS channels. You should also cooperate by engaging in permissible transmissions only, avoiding channel interference with other GMRS users, and being prudent with the length of their transmission time.

To obtain a license or ask questions about the license application, contact the FCC at 1-888-CALL FCC or go to the FCC's website:  
[www.fcc.gov/services/personal/generalmobile/licensing.html](http://www.fcc.gov/services/personal/generalmobile/licensing.html)

### **Exposure To Radio Frequency Energy**

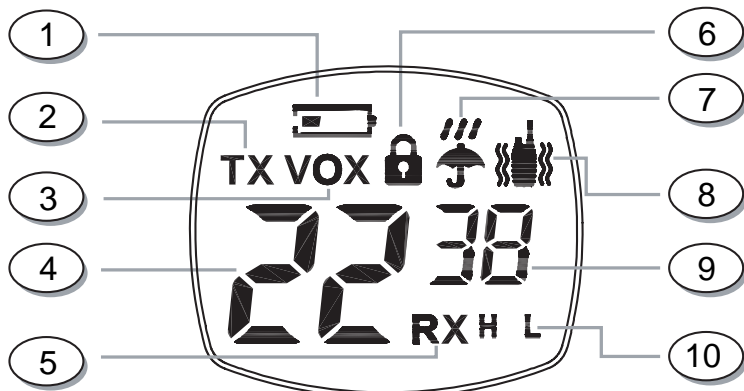
Your Midland radio is designed to comply with the following national and international standards and guidelines regarding exposure of human being to radio frequency electromagnetic energy:

- United States Federal Communications Commission, Code of Federal Regulations: 47 CFR part 2 sub-part J
- American National Standards Institute (ANSI)/Institute of Electrical & Electronic Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronic Engineer (IEEE) C95. 1-1999 Edition
- National Council on Radiation Protection and Measurements (NCRP) of the United States, Report 86, 1986
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998

To control your exposure and ensure compliance with the general population or uncontrolled environment exposure limits, transmit no more than 50% of the time. The radio generates measurable RF energy exposure only when transmitting.

**IMPORTANT:** Changes or modifications to this unit not expressly approved by **MIDLAND RADIO CORP.** could void your right to operate this unit. 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 COMMUNICATOR to exceed those limitations. Any adjustment to your radio must be made by qualified technicians.

## LCD DISPLAY



1. **LOW BATTERY ICON** – Indicates the battery level is low.
2. **TRANSMIT (TX) ICON** – Indicates radio is transmitting a signal.
3. **eVOX (LXT310/350/410/435 Series only)** – Indicates when eVOX mode is active.
4. **CHANNEL NUMBER** – Changes from 1~22 on GMRS/FRS band (1~10 on WX band).
5. **RECEIVE (RX) ICON** – Indicates radio is receiving a transmission.
6. **KEY LOCK ICON** – Indicates KEY LOCK mode is on.
7. **WX BAND ICON (LXT310/350/410/435 Series only)** – Indicates when the radio is in Weather Band mode
8. **VIBRATE-ALERT ICON (LXT410/435 Series only)**– Indicates when the Vibrate-Alert feature is on
9. **PRIVACY CODE (LXT310/350/410/435 Series only)**– Indicates Privacy Code selected by user (0F~38) .
10. **TRANSMIT POWER LEVEL ICON** – Indicates TX Power setting (H/L)

## CONTROLS



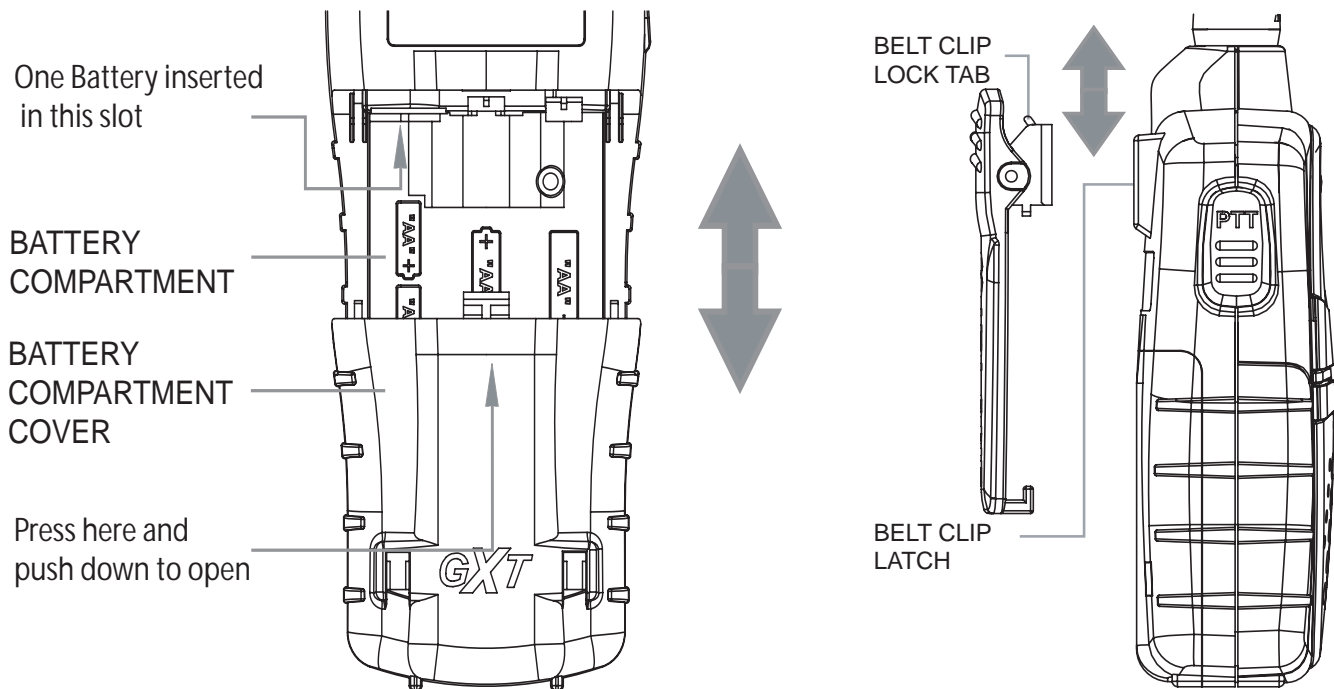
11. **PTT Button** – Press and hold to transmit voice communication.
12. **CALL/LOCK Button** – Press to send a CALL tone signal. Press and hold to turn KEY LOCK on/off.
13. **MIC** – Built-in microphone.
14. **SPEAKER** – Built-in speaker.
15. **ANTENNA.**
16. **EXTERNAL SPEAKER/MIC/CHG. JACK**
17. **POWER / MENU Button** – Press and hold for at least 3 seconds to turn the radio on/off. Press momentarily to access Menu mode.
18. **MONITOR (LXT410/435 Series only) /SCAN Button** – Press to enter SCAN mode. Press and hold to enter MONITOR (LXT410/435 Series only) mode
19. **UP ▲ and DOWN ▼ Button** – Make adjustments in MENU mode.

## BATTERY INSTALLATION

Your LXT210/216/303/305/310/350/410/435 Series radio operates with either 4 AA alkaline batteries or an optional NiMH battery pack. The belt clip should be removed (see below) to ease installation or removal of the batteries.

To install the batteries:

1. With the back of the radio facing you, remove the belt clip (see diagram below) for easy access, then remove the Battery Cover by pressing down on the top center and sliding it down from the radio.
2. Insert 4 AA batteries observing the polarity as shown. Installing the batteries incorrectly will prevent the unit from operating or may damage the unit.
3. Return the Battery Cover by sliding it up on the radio. Replace the belt clip, making sure it locks into place.



## INSTALLING THE BELT CLIP

To install the **BELT CLIP**, slide the clip down into the slot on the back of the radio until the **BELT CLIP LATCH** clicks. To remove the **BELT CLIP**, press the **LOCK TAB** down, then gently pull the belt clip up toward the top of the radio.

## CHARGING THE OPTIONAL BATTERY PACK

Your LXT210/216/303/305/310/350/410/435 Series is equipped for using an optional rechargeable NiMH battery pack which can be recharged by inserting the AC adapter into the radio charge jack, or with optional desktop charger (as described below). Initial charge time is 24 hours. Charge time is about 12 hours thereafter. For maximum battery life, we recommend charging the battery pack when the low battery icon comes on. Remove the radios from the charger when the charge time expires.

### To charge using a Desktop Charger:


1. Place the rechargeable battery packs in the radios.
2. Connect the AC adapter into an AC wall outlet.
3. Insert the AC adapter plug (or DC Cigarette Lighter adapter if charging in vehicle) into the desktop charger jack.
4. Place the units into the desktop charger slot and note that the LED indicator with **RED** color will light up, indicating charging function.

***In order to ensure that the battery pack is fully charged, it is recommended that the battery pack be charged for at least 12 hours.***



1. Only use our NiMH battery pack.
2. Do not attempt to charge alkaline batteries or any batteries or battery packs other than the one indicated in the manual. This may cause leakage and damage to the radio.
3. For long term storage of the radio, turn the radio OFF and remove the batteries from the radio.

## LOW BATTERY LEVEL INDICATOR

Your LXT210/216/303/305/310/350/410/435 Series has a LOW BATTERY ICON  which will only appear on the LCD display if the battery voltage level is low. At this point, the battery needs to be charged for at least 12hrs.

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## OPERATING YOUR RADIO

### POWER ON/OFF AND VOLUME

Press the **POWER/MENU** button for at least 3 seconds to turn the radio on/off. During Power On, the radio will beep 3 times with different tones, the LCD will display a “**self-test**” message for 1 second and the LCD display will indicate the last channel selected. To increase/decrease the volume level, press the ▼/▲ button during **RX** or **STANDBY** mode.

### TRANSMITTING AND RECEIVING A CALL

To communicate, all radios in your group must be set to the same channel and Privacy Code.

1. For maximum clarity, hold the radio 2 to 3 inches from your mouth.
2. Press and hold the **PTT** button and speak in a normal voice into the **microphone**. The **TX** icon will appear continuously on the LCD Display while transmitting.
3. To receive a call, release the **PTT** button. The **RX** icon will appear on the display when your radio is receiving a transmission.

### ABOUT RANGE

Your LXT Series radios are designed to give you maximum range under optimum conditions.

Optimum Conditions are:

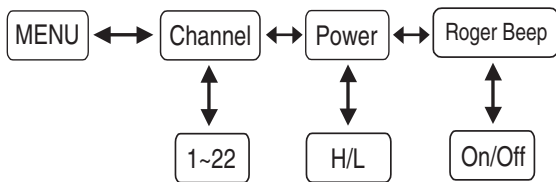
- Over water
- Open rural areas without obstructions
- Flat areas where you can see the other person

To ensure you get maximum range:

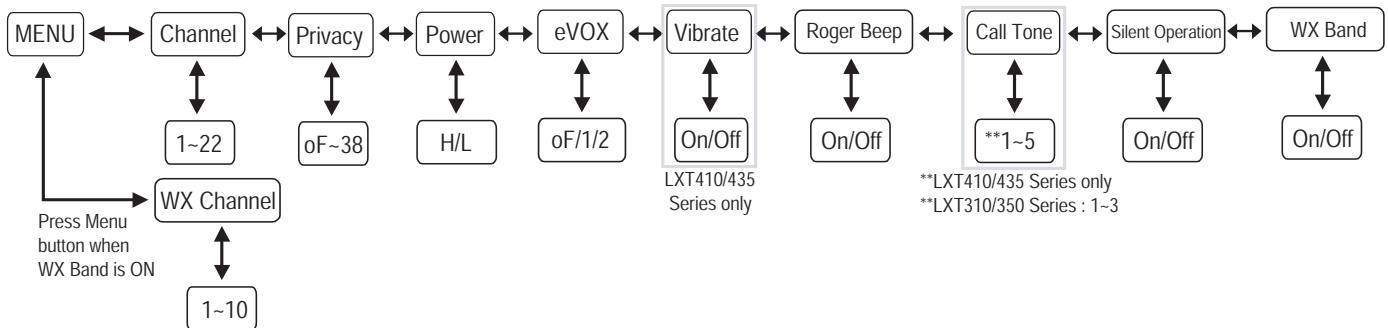
- Be sure to use fresh or fully charged batteries - low batteries will cause low power conditions
- Be sure you are on a GMRS channel - FRS channels are restricted by the FCC to low power
- Be sure to set your radio to use Hi power.



## LXT210/216/303/305 SERIES QUICK REFERENCE CHART



## LXT310/350/410/435 SERIES QUICK REFERENCE CHART



### MONITOR (LXT310/350/410/435 Series only)

Pressing and holding the **MONITOR** button for 1 second will let you hear noise so you can adjust the volume level of the radio when not receiving a signal. This should be used to check activity on your current channel before transmitting.

Press and hold the **MONITOR** button for 1 second again to get out of **MONITOR** mode.

### SCAN

Your LXT210/216/303/305/310/350/410/435 Series can scan all 22 channels for activity. To enter, quickly press the **SCAN** button. Repeat the same procedure to exit. Your radio will rapidly scan each of the 22 channels and stop on any active channel for 5 seconds before resuming scan.

When you press the **PTT** button to transmit on an active channel, the scanning function will stop and remain on the active channel. To resume scanning, quickly press the **SCAN** button.

## CALL TONE

Your LXT210/216/303/305/310/350/410/435 Series can transmit a call tone for a fixed length of time. To send a call tone, press the **CALL** button. The **TX** icon will appear while transmitting a call tone and a tone can be heard on the speaker for confirmation.

## KEYPAD LOCK

To avoid accidentally changing the radio setting, press the **LOCK** button for 4 seconds. The **KEY LOCK** icon will appear on the display. **PTT** and **CALL** will still be active. Repeat the same procedure to unlock the keypad.

## CHANNEL SELECTION (GMRS/FRS BAND)

Press the **MENU** button once, and then the **▼/▲** buttons to select one of the 22 GMRS/FRS channels. To confirm the selection, press the **PTT** button or press the **MENU** button again to move to the next feature setting.

## SETTING PRIVACY CODES (LXT310/350/410/435 Series only)

Your LXT310/350/410/435 Series has 38 **Privacy** codes available. The selected **Privacy Code** may be different for each channel. To select a **Privacy Code** for the current channel press the **MENU** button twice, and then the ▼/▲ buttons to select one of the 38 **Privacy Codes**. To confirm the selection, press the **PTT** button or press **MENU** button again to move to the next feature setting.

**Note** : Selecting a Privacy Code of "oF" will disable the Privacy feature. To communicate between two LXT310/350/410/435 Series radios, all radios in your group must be set to the same channel and Privacy Code selections.

## TRANSMIT (TX) POWER LEVEL SELECTION :

Your LXT210/216/303/305/310/350/410/435 Series has 2 power level settings. To select the power level on channels 1~7 and 15~22, press the **MENU** button three times (two times for LXT210), a "Pr" icon will appear blinking on the display. Then press the ▼/▲ buttons to select **TRANSMIT POWER LEVEL** icon (H: Hi/L: Lo). To confirm, press the **PTT** button or press **MENU** button again to move to the next feature setting. **When the PTT button is pressed during Low Battery Level condition, the TX Power will automatically switch from Hi(H) to Lo(L) level.**

**Note** : *You cannot adjust the power setting on the FRS channels (8~14). They are set to Low power per FCC regulations.*

## eVOX (Hands-free Transmission for LXT310/350/410/435 Series only)

Your LXT310/350/410/435 Series has 2 eVOX level settings: (oF/1/2). To set **eVOX**, press the **MENU** button four times. The display shows "VOX" blinking while on the right of the **CHANNEL NUMBER** display, an "oF" icon appears. Select "1" or "2" by pressing the ▼/▲ buttons and push the **PTT** key, or press **MENU** button again to move to the next feature setting.

**eVOX** will be more sensitive on the "2" setting than on the "1" setting. To turn **eVOX** off, press the **MENU** button four times. The display shows "VOX" blinking while on the right of the **CHANNEL NUMBER** display, a "1" or "2" icon appears. Select "oF" by pressing the ▼/▲ buttons and push the **PTT** key, or press **MENU** button again to move to the next feature setting.

### **VIBRATE ALERT (LXT410/435 Series only)**

To turn the **VIBRATE ALERT** on, press the **MENU** button five times so the display will show the **VIBRATE-ALERT** icon blinking, while on the right of the **CHANNEL NUMBER**, an “**oF**” icon appears. Select “**on**” by pressing the ▼/▲ buttons and push the **PTT** button, or press **MENU** button again to move to the next feature setting. The **VIBRATE ALERT** icon will remain on the display.

To turn the **VIBRATE ALERT** off, press the **MENU** button five times, so the display will show the **VIBRATE ALERT** icon blinking, while on the right of the **CHANNEL NUMBER**, an “**on**” icon appears. Select “**oF**” by pressing the ▼/▲ buttons and push the **PTT** button, or press **MENU** button to move to the next feature setting. The **VIBRATE ALERT** icon will go off.

### **ROGER BEEP (end of transmission) TONE**

When the **PTT** button is released, the radio will beep to confirm to other users that your transmission has finished.

To turn the **ROGER BEEP** tone on, press the **MENU** button until the display shows an “**rb**” icon while on the right of the “**rb**” display, an “**oF**” icon appears. Select “**on**” by pressing the ▼/▲ buttons and push the **PTT** key, or press **MENU** button to move to the next feature setting.

To turn the **ROGER BEEP** tone off, press the **MENU** button until the display shows an “**rb**” icon while on the right of the “**rb**” display, an “**on**” icon appears. Select “**oF**” by pressing the ▼/▲ buttons and push the **PTT** key, or press **MENU** button to move to the next feature setting.

## CALL TONE SELECTION (LXT310/350/410/435 Series only)

Your LXT410/435 Series has 5 selectable **CALL TONES** while LXT310/350 has 3. To select, press the **MENU** button until a “**CA**” icon appears and to the right of the “**CA**” icon the current **CALL TONE** setting is displayed. Then press the ▼/▲ buttons to make the **CALL TONE** selections - the radio will emit a corresponding tone for each selection. To confirm, press the **PTT** button or press **MENU** button to move to the next feature setting.

## SILENT OPERATION

Your LXT310/350/410/435 Series has a **SILENT OPERATION** mode. In this mode, all “beeps” and “tones” are disabled.

*To turn the **SILENT OPERATION** mode on,* press the **MENU** button until the display shows an “**bP**” icon while on the right of the “**bP**” display, an “**on**” icon appears. Select “**of**” by pressing the ▼/▲ buttons and push the **PTT** key or **MENU** button.

*To turn the **SILENT OPERATION** mode off,* press the **MENU** button until the display shows an “**bP**” icon while on the right of the “**bP**” display, an “**oF**” icon appears. Select “**on**” by pressing the ▼/▲ buttons and push the **PTT** key or **MENU** button.

## WEATHER (WX) BAND RECEIVER (LXT310/350/410/435 Series only)

Your LXT310/350/410/435 Series has a **WEATHER (WX) BAND RECEIVER** function, to enable user to receive weather alert/reports from designated **NOAA** stations.

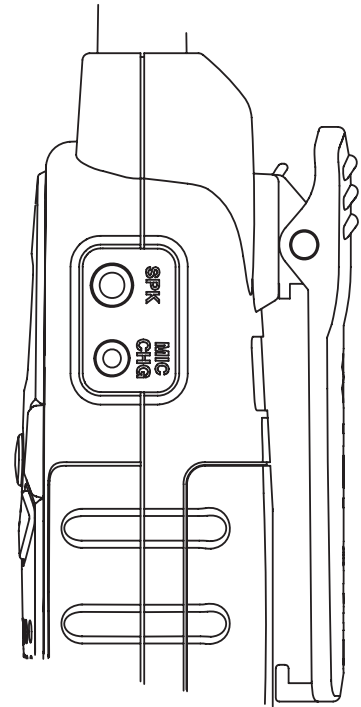
To turn the **WEATHER (WX) RECEIVER** on, press the **MENU** button until the **WX Band** icon appear while in the right an “**oF**” icon appears. Select “**on**” by pressing the ▼/▲ buttons and push the **MENU** button to confirm. The display will show the current **WX Band** channel setting. While on **WX Band** mode press the **MENU** button once, and then the ▼/▲ buttons to select one of the 10 **WEATHER (WX) BAND** channels.

To turn the **WEATHER (WX) RECEIVER** off, press the **PTT** button.

**EXTERNAL SPEAKER/MICROPHONE JACK :**

Your LXT210/216/303/305/310/350/410/435 Series can be used with an optional external speaker/microphone or headset, freeing your hands for other tasks. To use an optional speaker / microphone or headset:

- Insert the plug(s) into the **SPK/MIC** jacks
- Place the earbud into your ear, and adjust the mic into your desired position.



## TROUBLESHOOTING GUIDE

PROBLEM	SOLUTION
No Power	- Check battery installation and/or replace batteries
Cannot Receive Messages	- Confirm the radios have the same channel and Privacy Code settings. - Make sure that you are within range of the other transceivers. - Buildings and other structures may interfere with your communication. <b>(See ABOUT RANGE on Page 8)</b>
Radio is not responding to button presses	- Make sure key lock is not on. See "Keypad Lock" (Page 10). - Radio might need to be reset. Turn radio off then on. - Ensure accessory microphone is set properly
Display is dim	- Recharge or replace batteries.
Charger not functioning	- Contacts on the back of the radio may require cleaning. - Ensure the outlet where the charger is plugged into is functioning properly. - Check that the battery pack is installed in the radio properly.

### USE AND CARE :

1. Use a soft damp cloth to clean the radio
2. **Do not** use alcohol or cleaning solutions to clean the radio.
3. **Do not** immerse the radio in water.
4. Dry the radio with dry lint-free cloth should it get wet.
5. Turn off the radio and remove the batteries during long-term storage.

**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.**



## SPECIFICATIONS

**Channels** 22 GMRS/FRS Channels +38 Privacy Codes  
10 Weather (WX) Band Channels

**Operating Frequency** UHF 462.5500 ~ 467.7125 MHz

**Power Source** 4 AA Alkaline or 6.0V Rechargeable Ni-MH battery pack

### GMRS/FRS FREQUENCY CHART (MHz)

CH. No	CH. Freq.	CH. No	CH. Freq.	CH. No	CH. Freq.
1	462.5625	9	467.5875	17	462.6000
2	462.5875	10	467.6125	18	462.6250
3	462.6125	11	467.6375	19	462.6500
4	462.6375	12	467.6625	20	462.6750
5	462.6625	13	467.6875	21	462.7000
6	462.6875	14	467.7125	22	462.7250
7	462.7125	15	462.5500		
8	467.5625	16	462.5750		

\* Channels 8~14 are low-power FRS license free channels

### (LXT310/350/410/435 Series) WEATHER (WX) RECEIVER FREQUENCY CHART (MHz)

CH. No	CH. Freq.	CH. No	CH. Freq.
1	162.550	6	162.500
2	162.400	7	162.525
3	162.475	8	161.650
4	162.425	9	161.775
5	162.450	10	163.275

\* Channel 8,9 and 10 are designated Canadian Marine Frequencies

### PRIVACY CODES FREQUENCY CHART (Hz)

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

Note: Privacy codes can be programmed for use on any channel





## LIMITED WARRANTY

Midland Radio Corporation will repair or replace, at its option without charge, any Midland FRS/GMRS transceiver which fails due to a defect in material or workmanship within Three Years following the initial consumer purchase. This warranty does not apply to water damage, battery leak or abuse.

This warranty does not include any carrying cases, earphones, or antennas, which may be a part of or included with the warranted product, or 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 proof of purchase to:

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

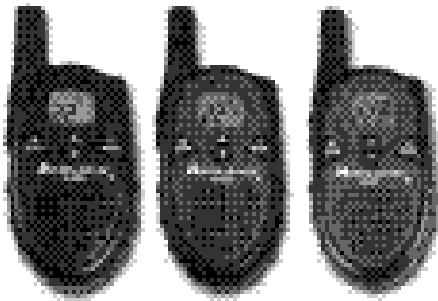
This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

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

**Midland Radio Corporation  
5900 Parretta Drive  
Kansas City, MO 64120  
Tel: (816) 241-8500  
E-mail: [mail@midlandradio.com](mailto:mail@midlandradio.com)  
URL: [www.midlandradio.com](http://www.midlandradio.com)**

# Other Midland Products

## GMRS 2-Way Radios



## Weather Radios



## CB Radios



## ACCESSORIES

Accessories can be purchased at [www.midlandradio.com](http://www.midlandradio.com) or fill in the form on the following page and mail it to our address.

### AVP-1



- 2 Over the Ear Mic. Headsets w/ PTT

- **\$19.95**

### AVP-4



- 1 Dual Desk Charger
- 2 Rechargeable battery packs
- 1 AC Adapter
- 1 DC Cigarette lighter adapter

- **\$39.95**



# ACCESSORIES ORDER FORM

Please send Money Order or fill in Visa/MasterCard information and mail to the address below. Please **DO NOT** send cash or checks. Make Money Order to Midland Radio Corporation.

**Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City:** \_\_\_\_\_ **State** \_\_\_\_\_ **Zip Code** \_\_\_\_\_

**Tel:** \_\_\_\_\_ **email:** \_\_\_\_\_

**CC#** \_\_\_\_\_ **Type:** \_\_\_\_\_ **Exp.** \_\_\_\_\_

Qty	Item	Price	Total
	AVP-1	\$19.95	
	AVP-4	\$39.95	

Sub-Total \_\_\_\_\_  
 Tax (MO, CO, IL, FL only) \_\_\_\_\_  
 S & H (U.S. only) \_\_\_\_\_ \$14.95  
 Total \$ \_\_\_\_\_

**Mail To:**  
 Midland Radio Corporation  
 Consumer. Dept.  
 5900 Parretta Drive  
 Kansas City, MO 64120  
 -----  
 Or Call 816.241.8500.  
 -----  
 To order online go to  
**[www.midlandradio.com](http://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.**