



**MICRO** **MOBILE**<sup>®</sup> GMRS 2-WAY RADIO



**MXT400**

[midlandusa.com](http://midlandusa.com)

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## **WELCOME TO THE WORLD OF MIDLAND RADIO**

Congratulations on your purchase of a high quality MIDLAND product. Your MXT400 2-way radio represents state-of-the-art high tech engineering. Designed for General Mobile radio Service (GMRS) operation, this compact package is big on 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 MXT400 radio is designed for reliable and trouble-free performance for years to come.

## **FEATURES**

- 15 GMRS Channels
- 8 Repeater Channels
- 142 Privacy Codes (38 CTCSS / 104 DCS)
- Monitor Function
- Scan Function
- Keypad Lock
- Power Hi/Mi/Lo Settings
- External Speaker Jack

## FCC NOTICE

The MXT400 operates on GMRS (General Mobile Radio Service) frequencies, which require a Federal Communications Commission (FCC) license. You must be licensed prior to operating on channels 1-7, 15-22 or RP15-22, which comprise the GMRS channels of the MXT400. Serious penalties may result from 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 that should be used for station identification when operating your 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 your 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:

**[http:// www.fcc.gov](http://www.fcc.gov) and request form 605.**

## 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 beings 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 & Electronics Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronics Engineers (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:
  1. Transmit no more than 50% of the time. The radio generates measurable RF energy exposure only when transmitting
  2. Use an antenna with maximum gain of 2.1 dBi including coax losses
  3. Maintain a minimum safe separation distance of 51 inches (130 cm) between the antenna and all persons when transmitting

## INSTALLING YOUR RADIO

### Preparation for Installation

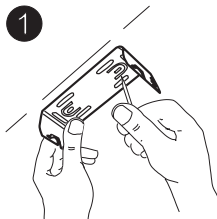
This radio may be installed in any 12-volt negative ground system vehicle. Most current U.S. and Foreign vehicles use a negative ground system, but some older models and some newer large trucks may have a positive ground. Check the specifications for your vehicle before beginning installation. Generally, you have a negative-ground system if the negative (-) battery terminal is connected to the motor block. Contact your dealer if you are unable to determine your vehicle's polarity system.

1. Read these instructions completely before beginning installation.
2. Read and follow all safety precautions in your vehicle's Service Manual.
3. Make sure all necessary tools, materials, and parts are on hand.
4. Disconnect the negative (-) battery cable before installing your radio. Be sure to reconnect the cable when installation is complete.
5. Determine a mounting location for your radio. Choose a location that does not impair visibility or interfere with driving. Also take into consideration the routing and length of the lead wires and cables to the power source, antenna, and/or optional external speaker.

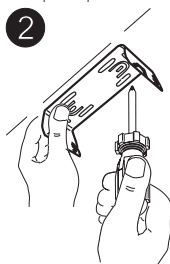
**CAUTION:** *Extreme care should be exercised when drilling into the dash to avoid damage to under dash electronic ignition, cruise control, instrument and/or accessory wiring.*

## Installing the Mounting Bracket

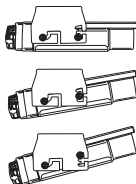
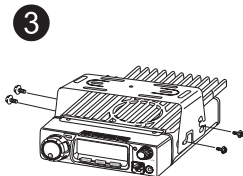
1. Using the mounting bracket as a template, mark the location of each screw hole. Use a nail or other sharp pointed object to mark the hole locations.



2. Attach the bracket with the supplied self-tapping screws. Tighten the screws securely. **DO NOT OVER-TIGHTEN.**



3. Determine the best suited position for using the radio, then insert and tighten the supplied SEMS screws.

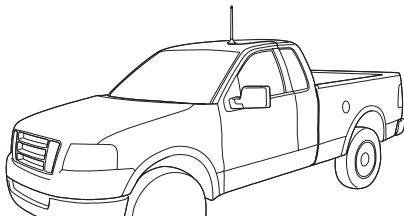


## Installing the Antenna

To get the best range from the MXT400 an external antenna (50Ω) should be used. The antenna is intended to be attached to the vehicle's roof, trunk or similar location. Specific installation requirements vary between vehicles. Use the following guidelines to install the antenna.

### **\*Where you locate your antenna does make a difference.\***

1. Metal surfaces covered by fiberglass or vinyl may affect radio range. Avoid these locations.
2. Mount the antenna as high on the vehicle as possible. The higher the better.
3. If possible, mount the antenna in the center of whatever surface you choose.
4. The antenna cable is 19.7 feet (6 meters) long. Be sure the mounting location will allow for connection of the cable to the radio.
5. Be sure the mounting location is clean and dry before installing the antenna.
6. Route the antenna cable through an accessible entry point, such as a rear door or trunk opening.
7. When routing the antenna cable inside the vehicle, keep the cable away from noise sources, such as the ignition system, gauges, etc.
8. Exercise care to prevent cable damage. Make use of existing gaskets, grommets and weather stripping to protect the cable along its route.





## Electrical and Rear Panel Connections

Refer to **Rear Panel Connections** for rear panel connector locations.

**NOTE:** *Radio antenna is installed separately.*

## Connecting the Radio to a Power Source

1. Connect the positive lead (RED wire with in-line fuse holder) to either (a) the fuse block or (b) directly to the positive post of the vehicle's battery.

**NOTE:** *The fuse block is usually the most convenient connection point. The power cord positive lead can also be connected to the Accessory terminal on the fuse block or ignition switch, so the radio automatically turns off when the ignition is turned off.*

2. Tightly connect the ground lead (BLACK wire) directly to the vehicle's metal frame. A good direct metal-to-metal ground is essential for optimum performance.

## Connecting the Microphone

Insert the RJ45 connector into the front of the MXT400. To remove, lightly pinch the bottom region of the boot assembly of the Microphone and gently pull towards you.

The microphone bracket can then be attached to the vehicle dash or other convenient location in a manner similar to the mounting bracket.

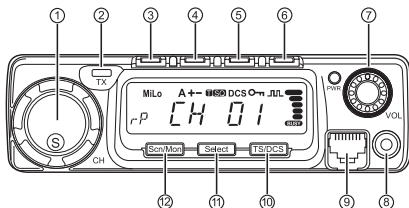
## Using an External Speaker

The MXT400 provides a rear-panel jack for connection of an optional external speaker (sold separately).

When selecting an external speaker, ensure the speaker has 8-ohm impedance and is rated for 4.0 watts.

**NOTE:** When an external speaker is connected, the radio's internal speaker is automatically disabled.

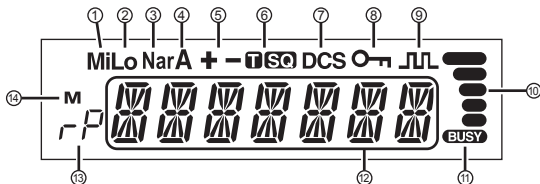
## CONTROLS AND INDICATORS



## Operating Controls

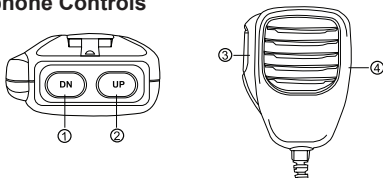
1	Channel	7	Volume
2	TX Indicator	8	Data Terminal - not used in the MXT400
3	Menu	9	Mic connector
4	Call/Lock	10	Privacy Tone
5	Power Level	11	Select
6	Power On/Off	12	Scan/Monitor

## LCD Display



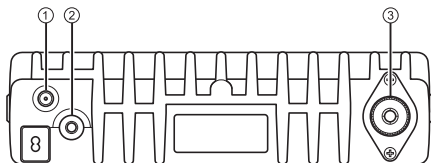
1	Medium Power	8	Keypad Lock
2	Low Power	9	Companion
3	Narrow Band	10	Signal Strength
4	Auto Power Off	11	Receiver Active
5	Repeater Offset	12	Channel Name
6	CTCSS Privacy Tone	13	Repeater Channel
7	DCS Privacy Tone	14	Scan Memory

## Microphone Controls



1.	Channel Down	4	Lock Switch - slide the switch down to lock all of the buttons on the mic except the PTT
2.	Channel Up		
3.	PTT (Push to Talk)		

## Rear Panel Connections



- 1. Ignition Input Jack** - Connect an optional ignition switched power source.
- 2. EXT SPKR Jack** - 3.5mm Audio connector for optional external speaker (sold separately).  
- see **Using an External Speaker** for specification.
- 3. ANT Jack** - SO-239 UHF connector for external antenna (sold separately).

## OPERATING YOUR RADIO

### About Range

Your MXT400 is designed to give you maximum operating range under optimum conditions.



*Maximum Range / No Sight Obstruction*



*Medium Range / Partial Obstruction to Line of Sight*



*Short Range / Major Obstruction to Line of Sight*

Optimum conditions for maximum operating range are:

- Over water
- In open rural areas without obstructions
- On flat areas where you can see the other radio user

### To ensure you get maximum range:

- Be sure to mount the antenna (sold separately) as high as possible on your vehicle
- Be sure to set your radio to use Hi power (see **Selecting the Transmit (TX) Power Level**)

## Power On/Off

### *To turn the radio on and off:*

1. With the radio off, quickly press and release the **Power On/Off** button to turn the radio on.
  - The LCD display will display the Midland welcome screen and then display the most recently selected channel.
2. With the radio on, press and hold the **Power On/Off** button to turn the radio off.
  - The LCD display will go blank when the radio turns off.

## Selecting the Active Channel

**IMPORTANT!** *To communicate between two MXT400 radios or any GMRS radio, both radios must be set to the same channel and Privacy Code (see **Selecting a Privacy Code**) selections.*

### *To select the active channel:*

1. Be sure the radio is turned on (see **Power On/Off**)
2. Rotate the **Channel** Knob clockwise to scroll forward through the available channels. Rotate the **Channel** Knob counter-clockwise to scroll backward through the available channels.
  - The **Channel** icon on the LCD display will show the currently selected channel.

## Transmitting and Receiving a Call

**IMPORTANT!** *To communicate between two MXT400 radios or any GMRS radio, both radios must be set to the same channel and Privacy Code.*

### *To transmit and receive a call:*

1. Be sure the radio is turned on (see **Power On/Off**)
2. To transmit a call, press and hold the **PTT** button on the microphone, and speak into the microphone in a normal voice.

**NOTE:** *For maximum clarity, hold the microphone 2 to 3 inches from your mouth when speaking.*



- The **TX Indicator** will show continuously on the LCD display while transmitting.
3. To receive a call, release the **PTT** button on the microphone.
    - The **Busy** icon will show on the LCD display when your radio is receiving a transmission.
  4. If necessary, rotate the **Volume** Knob to increase or decrease radio volume.

## Locking the Keypad

You can use the keypad “lock” function to prevent accidentally changing your radio’s settings. When the function is enabled, the current radio settings are “locked” in place.

**NOTE:** When the “lock” function is enabled, the **PTT** button on the microphone and the **Volume** Knob on the radio remain active.

### **To “lock” and “unlock” the keypad:**

1. Be sure the radio is turned on (see **Power On/Off**)
2. Press and hold the **Call** button.
  - The **Keypad Lock**  icon will show on the LCD display when the keypad is “locked.”
3. Repeat steps 1 and 2 to “unlock” the keypad.
  - The **Keypad Lock**  icon will turn off when the keypad is “unlocked”

## Using Monitor Mode

Monitor mode lets you check for activity on the current active channel. You can also use Monitor mode to adjust the volume of your radio when not receiving a signal.

### **To enter and exit Monitor mode:**

1. Be sure the radio is turned on (see **Power On/Off**)
2. Be sure you have selected the desired channel (see **Selecting the Active Channel**)

3. Press and hold the **Scn/Mon** button to enter Monitor mode.
  - You will hear any activity on the current selected channel.
4. Rotate the **Volume** Knob to increase or decrease radio volume.
5. Once the radio volume has been adjusted to the desired level, press and hold the **Scn/Mon** button to exit Monitor mode.

## Scanning for Active Channels

Your MXT400 includes an “auto-scan” mode that continuously scans all 15 GMRS channels for activity.

### To enter and exit “auto-scan” mode:

1. Be sure the radio is turned on (see **Power On/Off**)
2. Quickly press and release the **Scn/Mon** button to enter “auto-scan” mode
  - Your radio will rapidly scan through the 15 GMRS channels and will pause on any active channel.
  - “Auto-scan” will resume when there has been no activity on the current channel for four seconds.
3. To transmit during “auto scan,” press and hold the **PTT** button on the microphone while the radio is paused on the desired channel.
  - The radio will remain on the active channel for three seconds after the **PTT** button is released.
4. To exit the “auto-scan” mode, quickly press and release the **Scn/Mon** button.

Scan Skip allows channels to be removed from the scan list. The “M” icon on the left side of the display indicates the channel is currently in the scan list.

1. Select the channel you would like to remove from the scan list.
2. Long press the **Menu** button. The M icon should turn off indicating the channel will not be scanned.
3. To add back a channel previously removed, select that channel and long press the **Menu** button again. The M icon will turn on indicating the channel has been restored to the scan list.

## Call Alert

Your radio can transmit a call alert for a fixed length of time.

### To send a call alert

1. Press and release the **CALL** button.
  - The **TX** indicator will enable while transmitting a call alert and a tone can be heard on the speaker for confirmation.



## UTILITY FUNCTIONS

Utility functions let you configure several operational parameters of the MXT400 to suit your personal preferences. For additional operational functions, see “**MENU**” **MODE FUNCTIONS**.

### Selecting a Privacy Code

Continuous Tone Coded Squelch System (CTCSS) and Digitally Coded Squelch (DCS) are systems that allow several users to share the same channel without disturbing each other. When CTCSS or DCS are enabled for a selected channel, the channel is muted to all incoming signals unless they carry the correct CTCSS or DCS tone.

When a transmission with the correct tone is received, the mute is removed and the voice audio can be heard. When the transmission ends the channel is muted again. Transmissions that do not have the correct tone are not heard.

The MXT400 has 142 Privacy Codes (38 CTCSS codes and 104 DCS codes), which can be applied to any channel. If desired, you can select a different Privacy Code for each channel. See **CTCSS Privacy Codes Frequency Chart and DCS Privacy Codes Chart** for lists of available Privacy Codes.

**IMPORTANT!** *To communicate between two MXT400 radios or any GMRS radio, both radios must be set to the same channel (see **Selecting the Active Channel**) and Privacy Code selections.*

#### **To select a CTCSS Privacy Tone:**

The receive and transmit privacy tones may be set independently. RCP is used to set the receive privacy tone, which may be called the repeater output tone for repeater channels. TCP is used to set the transmit privacy tone, which may be called the repeater input tone for repeater channels.

1. Press the **TS/DCS** button to enter receive privacy tone selection mode, RCP.
2. Turn the **Channel** knob to choose TSQ for RCP selection.
3. Press the **Select** button.
4. Turn the **Channel** knob to choose the desired receive CTCSS tone.

5. Press the **Select** button to confirm the receive privacy tone selection and move to transmit privacy tone selection, TCP.
6. Turn the **Channel** knob to choose TSQ for TCP selection.
7. Press the **Select** button.
8. Turn the **channel** knob to choose the desired transmit CTCSS tone.
9. Press the **Select** button to confirm the transmit privacy tone selection and exit.

### ***To Select a DCS Privacy Code:***

The receive and transmit privacy codes may be set independently. RCP is used to set the receive privacy code, which may be called the repeater output code for repeater channels. TCP is used to set the transmit privacy code, which may be called the repeater input code for repeater channels.

1. Press the **TS/DCS** button to enter receive privacy code selection mode, RCP.
2. Turn the **Channel** knob to choose DCS for the RCP selection.
3. Press the **Select** button.
4. Turn the Channel knob to choose the desired receive DCS code number. See the DCS Privacy Code Chart near the end of this manual to equate the code number to the DCS code.
5. Press the Select button to confirm the receive privacy code selection and move to transmit privacy code selection, TCP.
6. Turn the Channel knob to choose DCS for TCP selection.
7. Press the Select button.
8. Turn the Channel knob to choose the desired transmit DCS code number. See the DCS Privacy Code Chart near the end of this manual to equate the code number to the DCS code.
9. Press the Select button to confirm the transmit privacy code selection and exit.

**NOTE:** To disable privacy tones/codes, select OFF for either or both receive privacy, RCP, and transmit privacy, TCP.

**NOTE:** CTCSS selections will be indicated by the T SQ icons on the display. DCS selections will be indicated by the DCS icon on the display.

**NOTE:** Press the **TS/DCS** button repeatedly to review the receive and transmit privacy selections without making changes.

**NOTE:** When a new receive privacy selection is confirmed by pressing the Select button, it is copied to the transmit privacy selection. Pressing the Select button to exit will confirm the new transmit privacy selection.

## Selecting the Transmit (TX) Power Level

The MXT400 provides up to 3 transmit power levels; Hi, Mi and Lo. The Lo power level is generally suitable when operating under optimum conditions (see **About Range**). The Hi power level is recommended to ensure you get maximum range from your radio.

### *To adjust the Transmit Power Level:*

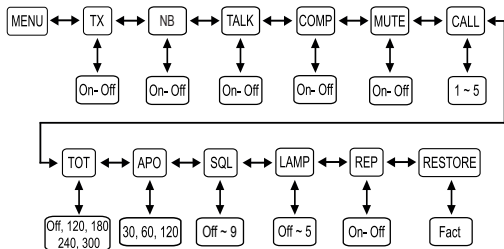
1. Press the **PLV** button to toggle the transmit power setting between **Hi**, **Mi** and **Lo**.

- Only the **Mi** and **Lo** transmit power settings will be indicated on the LCD, when neither **Mi** or **Lo** is indicated the unit is set to **Hi** transmit power.
- Due to output power regulations channels 1 through 7 cannot be removed from the **Lo** transmit power setting.

## “MENU”MODE FUNCTIONS

The “Menu” mode provides access to the features and functions shown in the chart below. For additional utility functions, see **UTILITY FUNCTIONS**.

**MXT400 “Menu” Mode Quick Reference Chart**



## Transmit (TX) Function

You can disable the transmitter section of the radio if you desire to use the radio as a receive only system.

### *To set the Transmit Function*

1. Press the **Menu** button to enter the Menu Mode.
2. Use the **Call** or **Plvl** buttons to scroll through the Menu options until the LCD displays **TX**.
3. Turn the **Channel** knob to select the setting you desire.
4. Press and release the **Select** button to confirm your choice.
5. Press the **Scn/Mon** button to exit the **Transmit Function**.

## **Narrow Band (NB) Function**

GMRS radios may operate in wide band mode, maximum 20 kHz occupied bandwidth. FRS radios are limited to narrow band mode, maximum 12.5 kHz occupied bandwidth, by FCC regulations.

For best clarity, all radios communicating together should use the same bandwidth. Midland GMRS radios use narrow band mode to provide optimum communication and spectrum efficiency with both FRS and GMRS radios which share the 12.5 kHz spaced FRS/GMRS channel frequencies. For systems using wide band GMRS radios, the MXT400 channel bandwidth can be switched to wide band mode.

### ***To Set the Narrow Band Function***

1. Press the **Menu** button to enter the Menu Mode.
2. Use the **Call** and **Plvl** buttons to scroll through the Menu options until the LCD displays NB.
3. Turn the **Channel** knob to choose OF(F) for wide band mode or ON for narrow band mode.
4. Press the **Select** button to confirm your choice.
5. Press the **Scn/Mon** button the exit.

## **Talk Around (Talk) Function**

The Talk Around function allows you to directly communicate with other radios in your group when the repeater is not activated or out of range.

The radio will use the **RX/TX** frequency and it's stored Privacy Tone settings when the Talk Around Function is enabled

### ***To set the Talk Around Function***

1. Press the **Menu** button to enter the Menu Mode.
2. Use the **Call** or **Plvl** buttons to scroll through the Menu options until the LCD displays **TALK**.
3. Turn the **Channel** knob to select the setting you desire.
4. Press and release the **Select** button to confirm your choice.
5. Press the **Scn/Mon** button to exit the Talk Around Function.

### **Voice Compander (Comp) Function**

The Voice Compander Function is used to reduce background noise and enhance audio clarity, especially in long range communication.

#### ***To set the Compander Function***

1. Press the **Menu** button to enter the Menu Mode.
2. Use the **Call** or **Plvl** buttons to scroll through the Menu options until the LCD displays **COMP**.
3. Turn the **Channel** knob to select the setting you desire.
4. Press and release the **Select** button to confirm your choice.
5. Press the **Scn/Mon** button to exit the Compander Function.

### **Silent Operation (Mute) Function**

The MXT400 has a Silent Operation mode. In this mode, all “beeps” and “tones” are disabled.

#### ***To set the Silent Operation:***

1. Press the **Menu** button to enter the Menu Mode.
2. Use the **Call** or **Plvl** buttons to scroll through the Menu options until the LCD displays **MUTE**.
3. Turn the **Channel** knob to select the setting you desire.
4. Press and release the **Select** button to confirm your choice.
5. Press the **Scn/Mon** button to exit the Silent Operation Function.

### **Call Alert (Call) Function**

The MXT400 can transmit different tones to other users alerting them to an incoming message. The MXT400 has 5 selectable tones.

### ***To set the Call Alert Tone***

1. Press the **Menu** button to enter the **Menu** Mode.
2. Use the **Call** or **P/VI** buttons to scroll through the Menu options until the LCD displays **Call**.
3. Turn the **Channel** knob to select the setting you desire.
4. Press and release the **Select** button to confirm your choice.
5. Press the **Scn/Mon** button to exit the Call Alert Function

### **Time Out Timer (TOT) Function**

The Time Out Timer limits the amount of transmitting time the radio has per PTT activation.

#### ***To set the Time Out Timer***

1. Press the **Menu** button to enter the Menu Mode.
2. Use the **Call** or **P/VI** buttons to scroll through the Menu options until the LCD displays **TOT**.
3. Turn the **Channel** knob to select the setting you desire.
4. Press and release the **Select** button to confirm your choice.
5. Press the **Scn/Mon** button to exit the Time Out Timer Function.

### **Auto Power-Off (APO) Function**

The Auto Power-Off function allows the user to set a time interval for the radio to automatically power off after no use.

#### ***To set the Auto Power-Off Function***

1. Press the **Menu** button to enter the Menu Mode.
2. Use the **Call** or **P/VI** buttons to scroll through the Menu options until the LCD displays **APO**.
3. Turn the **Channel** knob to select the setting you desire.
4. Press and release the **Select** button to confirm your choice.
5. Press the **Mon/Scn** button to exit the Auto Power-Off Function.

## Squelch Sensitivity

The MXT400 has adjustable squelch sensitivity. The minimum squelch level (0F) is the most sensitive, allowing the squelch to open on very weak signals. Setting the squelch to the maximum setting (09) requires very strong signals to open the squelch.

### *To adjust the Squelch Sensitivity:*

1. Press the **Menu** button to enter the **Menu** Mode.
2. Use the **Call** or **P/VI** buttons to scroll through the Menu options until the LCD displays **SQL**.
3. Turn the **Channel** knob to select the setting you desire.
4. Press and release the **Select** button to confirm your choice.
5. Press the **Scn/Mon** button to exit the Squelch Sensitivity Function.

## Display Brightness

You can adjust the six brightness levels of the LCD display to ensure optimum visibility under various daytime and night-time lighting conditions.

### *To adjust Display Brightness:*

1. Press the **Menu** button to enter the Menu Mode.
2. Use the **Call** or **P/VI** buttons to scroll through the Menu options until the LCD displays **LAMP**.
3. Turn the **Channel** knob to select the setting you desire.
4. Press and release the **Select** button to confirm your choice.
5. Press the **Scn/Mon** button to exit the Display Brightness Function.

## Repeater Channels

The MXT400 has the ability to talk to GMRS repeaters, which can greatly increase radio range.

**NOTE:** *Be sure to be aware of the local sharing and usage policies set forth by the owner and operator of the repeater.*



### ***To set Repeater Channel Function:***

1. Press the **Menu** button to enter the **Menu** Mode.
2. Use the **Call** or **Plvl** buttons to scroll through the Menu options until the LCD displays **REP**.
3. Turn the **Channel** knob to select the setting you desire.
4. Press and release the **Select** button to confirm your choice.
5. Press the **Scn/Mon** button to exit the Repeater Channel Function.

## **Restoring The Default Settings**

You can restore the factory (default) settings for your MXT400 at any time.

### ***To restore the Default Settings:***

1. Press the **Menu** button to enter the Menu Mode.
2. Use the **Call** or **Plvl** buttons to scroll through the Menu options until the LCD displays **RESTORE**.
3. Turn the **Channel** knob to select the **FACT** option.
4. Press and release the **Select** button to confirm your choice.
  - Upon completion the radio will enter "standby" mode at channel 1, with no Privacy Code selected.

## **CARE AND MAINTENANCE**

**CAUTION: DO NOT** use alcohol or cleaning solutions to clean the radio.  
**DO NOT** immerse the radio in water.

1. Use a soft cloth moistened with water to clean the radio.
2. Dry the radio with a dry lint-free cloth should it get wet.

## TROUBLESHOOTING GUIDE

If you experience difficulties using your MXT400, refer to the following chart to correct common operation problems. If you have a problem which you believe requires service, please call first and speak with a service technician at 816-241-8500. Many problems can be remedied over the phone without returning the unit for service.

<b>Problem</b>	<b>Solution</b>
<b>No Power</b>	Check vehicle power source (battery); replace if needed.
	Check input power connection and/or wires to vehicle power source.
	Check in-line fuse; replace if needed.
<b>Cannot Receive Messages</b>	Verify both radios have the same Channel and Privacy Code settings.
	Make sure you are within range of the receiving radio/repeater.
	Confirm transmission is not affected by buildings and other structures (see <b>About Range</b> )
	If communicating with a repeater, verify if repeater requires activation code.
<b>Keypad is not Responding</b>	Make sure keypad "lock" is not on (see <b>Locking the Keypad</b> )
	Reset the radio (turn radio off then back on)
<b>Backlight Display is Dim</b>	Adjust the display illumination (see Display Illumination)

## SPECIFICATIONS

<b>Channels:</b>	15 GMRS Channels and 8 Repeater Channels
<b>Privacy Codes:</b>	38 CTCSS; 104 DCS
<b>Operating Frequency:</b>	RX; 462.5500 ~ 462.725 MHz TX, 462.5500 ~ 467.725 MHz
<b>Power Source:</b>	13.8 VDC Nominal

### GMRS Frequency Chart (MHz)

CH. No	CH. Freq.	CH. No	CH. Freq.
1	462.5625	15	462.5500
2	462.5875	16	462.5750
3	462.6125	17	462.6000
4	462.6375	18	462.6250
5	462.6625	19	462.6500
6	462.6875	20	462.6750
7	462.7125	21	462.7000
Ch. 8 ~ 14 Reserved for FRS use		22	462.7250

### GMRS Repeater Frequency Chart (MHz)

CH. No	RX Freq.	TX. Freq.	CH. No	RX Freq.	TX. Freq.
RP 15	462.5500	467.5500	RP 19	462.6500	467.6500
RP 16	462.5750	467.5750	RP 20	462.6750	467.6750
RP 17	462.6000	467.6000	RP 21	462.7000	467.7000
RP 18	462.6250	467.6250	RP 22	462.7250	467.7250

## CTCSS 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	192.4		
8	88.5	16	114.8	24	151.4	32	203.5		

## DCS PRIVACY CODE CHART

No.	CODE	No.	CODE	No.	CODE	No.	CODE
1	23	27	165	53	413	79	731
2	25	28	172	54	423	80	732
3	26	29	174	55	431	81	734
4	31	30	205	56	432	82	743
5	32	31	223	57	445	83	754
6	43	32	226	58	464	84	36
7	47	33	243	59	465	85	53
8	51	34	244	60	466	86	122
9	54	35	245	61	503	87	145
10	65	36	251	62	506	88	212
11	71	37	261	63	516	89	225
12	72	38	263	64	532	90	246
13	73	39	265	65	546	91	252
14	74	40	271	66	565	92	255
15	114	41	306	67	606	93	266
16	115	42	311	68	612	94	274
17	116	43	315	69	624	95	325
18	125	44	331	70	627	96	332
19	131	45	343	71	631	97	356
20	132	46	346	72	632	98	446
21	134	47	351	73	654	99	452
22	143	48	364	74	662	100	454
23	152	49	365	75	664	101	455
24	155	50	371	76	703	102	462
25	156	51	411	77	712	103	523
26	162	52	412	78	723	104	526



2-Way Radios



Weather Radios



HD Wearable Video Cameras



2-Way Radios



Emergency Crank Radios



CB Radios

## FCC Warnings and Statements

### IMPORTANT!

Changes or modifications to this unit not expressly approved by MIDLAND RADIO CORPORATION 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.

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

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment shall be installed and operated with minimum distance 145 cm between the radiator & body.

## **LIMITED WARRANTY (United States and Canada)**

Subject to the exclusions set forth below, Midland Radio Corporation will repair or replace, at its option without charge, any Midland FRS/GMRS which fails due to a defect in material or workmanship within One Year following the initial consumer purchase.

This warranty does not apply to water damage, battery leak, abuse or misuse of unauthorized accessories, unauthorized service or modification or altered products. Accessories have a 90 day warranty from date of purchase, including the power cable and microphone that are included with the unit.

ANY IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED AS SET FORTH HEREIN AND TO THE DURATION OF THE LIMITED WARRANTY, OTHERWISE THE REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS EXPRESS LIMITED WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER AND IS PROVIDED IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. IN NO EVENT SHALL MIDLAND BE LIABLE, WHETHER IN CONTRACT OR TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE, GROSS NEGLIGENCE, BODILY INJURY, PROPERTY DAMAGE AND DEATH) FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT OR ACCESSORY, OR FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, OR LOSS OF REVENUE OR PROFITS, LOSS OF BUSINESS, LOSS OF INFORMATION OR DATA OR OTHER FINANCIAL LOSS ARISING OUT OF OR IN CONNECTION WITH THE ABILITY OR INABILITY TO USE THE PRODUCTS OR ACCESSORIES TO THE FULL EXTENT THESE DAMAGES MAY BE DISCLAIMED BY LAW.

### **For Product Purchased in the USA:**

Performance of any obligation under this warranty may be obtained by returning the warranted product, prepaid freight, 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.*

### **For Product Purchased in Canada:**

Performance of any obligation under this warranty may be obtained by returning the warranted product, along with proof of purchase, to your place of purchase in Canada.

This warranty gives you specified legal rights. Additional warranty rights may be provided by law in some areas within Canada.

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**■ Licensing Information**

Use our radio in USA is subject to the rules & regulations of FCC. Changes or modifications not expressly approved by our may void the user authority granted by the FCC to operate this radio and should not be made. To comply with FCC requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services. Replacement of any transmitter component (crystal, semiconductor, etc) not authorized by the FCC equipment authorization for this radio could violate FCC rules.

**Note:** Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

**Important:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device. 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.

**WARNING:** MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.



**MIDLAND RADIO CORPORATION**

**5900 Parretta Drive**

**Kansas City, MO 64120**

**Call 816.241.8500**

**We'd love to hear from you! Let us know what  
you think of your new Midland product at:**



**or by visiting us at:**

**[midlandusa.com](http://midlandusa.com)**

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