

# **maxon<sup>®</sup>**

## **GMRS-50**

**General Mobile Radio Service  
Two-Way Radio**

**Owner's Manual**



## Table of Contents

|   |                   |
|---|-------------------|
| About Your GMRS-50 Radio.....                     | 1                 |
| Package Contents.....                             | 1                 |
| About Maxon/Topaz3.....                           | 1                 |
| Safety Information.....                           | 2                 |
| FCC Licensing Information.....                    | 2                 |
| FCC Forms and Information.....                    | 3                 |
| Radio Controls/Functions.....                     | 4                 |
| Battery Charging and Care.....                    | 5                 |
| Installing and Removing the Battery Pack.....     | 5                 |
| Antenna Installation.....                         | 6                 |
| Attaching and Removing the Belt Clip.....         | 6                 |
| GMRS-50 Operation.....                            | 6                 |
| Power On-Volume-Power Off.....                    | 6                 |
| To Transmit.....                                  | 7                 |
| To Receive.....                                   | 7                 |
| Status Indicators and Audible Alert Tones.....    | 7                 |
| Accessories.....                                  | 8                 |
| Pre-Programmed Frequencies.....                   | 9                 |
| Programmable Features.....                        | 9                 |
| Continuous Tone Coded Squelch System (CTCSS)..... | 9                 |
| Scan Mode.....                                    | 10                |
| Recycling / Disposal of Batteries.....            | 10                |
| Radio Maintenance / Service.....                  | 11                |
| Software Copyrights.....                          | 12                |
| Warranty Service Instructions.....                | 12                |
| Product Warranty Statement.....                   | Inside Back Cover |

## About Your GMRS-50 Radio

Congratulations, you now own the Maxon GMRS-50 two-way radio. Featuring 16 channel, 5 Watt operation, the GMRS-50 provides superior performance and reliability. Operation and functions for your radio are described in this instruction manual.

**We urge you to thoroughly read this manual before operating the radio.**

## Package Contents

Remove and carefully inspect the contents of your package(s) for the following items:

- Radio Transceiver Unit
- Antenna
- Belt Clip
- Rechargeable Ni-Cad Battery Pack
- Desktop Charger
- Operating Instructions

If any items are missing, please contact the place of purchase or Topaz3, 800-821-7848, Ext. 499.

## About Maxon / Topaz 3

Maxon is a world respected name in professional FM two-way radio equipment operating in the UHF, VHF and 800 MHz frequencies; personal two-way communication devices, including the popular FRS (Family Radio Service) and GMRS radios; and a variety of wireless communication products (two-way voice messaging handsets, Wireless Local Loop terminals, etc.).

Topaz3 is the exclusive supplier of Maxon products to North America. For more specific product information, visit our website: [www.topaz3.com](http://www.topaz3.com)

## Safety Information

The Federal Communications Commission (FCC), with its action in General Docket 93-62, November 7, 1997, has adopted a safety standard for human exposure to Radio Frequency (RF) electromagnetic energy emitted by FCC regulated equipment. We subscribe to the same safety standard for the use of this product. Proper operation of this radio will result in user exposure far below the Occupational Safety and Health Act and Federal Communications Commission limits.

**WARNING** - DO NOT hold the radio in such a manner that the antenna is next to, or touching, exposed parts of the body, especially the face or eyes, while transmitting.

**WARNING** - DO NOT allow children to operate transmitter - equipped radio equipment.

**CAUTION** - DO NOT operate the radio near unshielded electrical blasting caps or in an explosive atmosphere unless it is a type especially designed and qualified for such use.

**CAUTION** - DO NOT press and hold the transmit switch (P-T-T) when not actually wishing to transmit.

**NOTE:** This radio operates in FCC regulated frequency bands. All radios must be licensed by the FCC before use. Because this radio contains a transmitter, Federal law prohibits unauthorized use or adjustments of this radio.

## FCC Licensing Information

Before using your Maxon GMRS-50, you must obtain / possess a radio license issued by the Federal Communications Commission (FCC). It is illegal to transmit without the appropriate license.

The GMRS-50 operates on General Mobile Radio Service (GMRS) frequencies, which are allocated by the FCC for personal uses, including recreation and travel.

## FCC Licensing Information, Continued

### FCC Forms and Information

**To obtain a** FCC license to operate your GMRS-50 radio, you must submit FCC Form 574 directly to the FCC at this address:

Federal Communications Commission  
General Mobile Radio Service  
P.O. Box 358230  
Pittsburgh, PA 15251-5230

**To obtain** current FCC forms and filing instructions, you can:

- Have the forms **mailed to you** by calling the FCC Forms Hotline 1-800-418-FORM (3676).
- Have the forms **faxed to you** by the FCC's Fax Information System by calling 1-202-418-0177.

Request Form 574 for Maxon model GMRS-50G. A booklet entitled "Form 574 Instructions" can be obtained as well.

For more information regarding the licensing application, contact: the FCC at 888-CALL-FCC (225-5322).

**You are required** to have in your possession a current copy of Part 90 of the FCC Rules and Regulations before operating your radio. It is your responsibility to insure your radio operates in accordance with the guidelines established by the FCC. You should familiarize yourself with Part 90 of the FCC Rules before operating your radio.

**NOTE:** FCC Rule 95.5 applies to GMRS radios, as they are for personal use only.

**To obtain** current copies of FCC Rules, Part 90 or Part 95, contact:  
Superintendent of Documents  
Government Printing Office  
Washington, DC 20402-9371

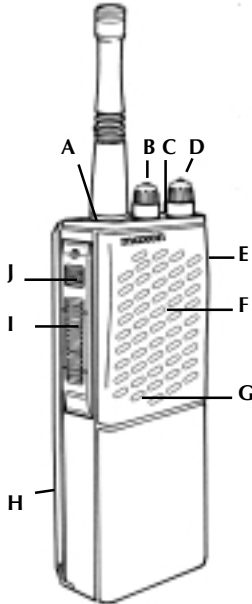
or by phone: 1-888-225-5322 (8:00 AM to 4:00 PM EST, Monday thru Friday, excluding Holidays).

Many larger metropolitan areas have U.S. Government book stores. Check the business listings of your local telephone directory under "Government Book Stores" for listings and locations.

## Radio Controls / Functions

- A Antenna Receptacle
- B Channel Selector Knob
- C Busy/TX/BT Indicator
- D On/Off - Volume Control
- E Accessory Jacks
- F Speaker
- G Microphone
- H Battery
- I Push-To-Talk (P-T-T)
- J Monitor Button

Not shown: Belt Clip (on back)  
Battery Charge Contacts (on back)  
Battery Latch (on bottom)



## Battery Charging and Care

To ensure peak performance from your radio, the battery pack must be fully charged. Proper care and charging will allow maximum performance and life from your battery pack.

The GMRS-50 comes standard with a desktop charger. Turn radio off and insert into charger. The charging cycle with this charger is overnight (12-16 hours).

The optional QPA-1130 Dual Slot/Dual Rate Desktop Charger provides quick charging in 1.5 hours and normal "slow" charging. The charger has two wells, one accommodates a radio with battery attached; the other is for a battery removed from the radio.

See accompanying instructions included with these chargers for more information.

To receive maximum performance from your radio and battery pack, periodically completely discharge and recharge the battery pack.

## Installing and Removing the Battery Pack

Hold the radio face down in your hand. **To attach the battery pack**, pick up the pack by the sides and hold it so that the four charging contacts are facing upward, positioned toward the bottom. Visually locate the "up" arrows embossed inside the radio, then place the pack onto the radio, positioning the top of the pack to slightly cover the arrows. Using your fingertips, ensure the pack is flush with the radio sides. The channels in the pack will align with the guides on the radio.

Slide the battery pack upward slowly. A click will verify that the battery pack is securely positioned.

**Remove the battery pack** by holding the radio face down in your hand. Slide and hold the battery latch (at the base of radio) then gently apply pressure to move the battery pack slightly downward. The pack will release from the radio's guide rails. Lift the battery pack straight up and away from the radio.

## Antenna Installation

Attach the antenna by turning clockwise into the antenna receptacle on top of the radio.

## Attaching and Removing the Belt Clip

**To attach the belt clip to the radio's battery pack**, hold the clip and slide it into the recessed area at the top of the pack. A click will verify the clip is securely positioned. **To remove the clip**, press and hold the release tab toward the clip while gently pulling the belt clip assembly off the radio.

## GMRS-50 Series Operations

### Power On - Volume - Power Off

Turn the radio on by rotating the on/off - volume control clockwise until you hear a click and a single tone. Increase the radio volume by continuing the clockwise rotation. To turn the radio off when you have finished transmitting, receiving, etc., rotate the control counter-clockwise to detent.

### To Transmit

#### CAUTION

OPERATION OF THE TRANSMITTER WITHOUT  
A PROPER ANTENNA INSTALLED MAY RESULT IN  
PERMANENT DAMAGE TO THE RADIO

**NOTE:** FCC Rules and Regulations require that you monitor a channel for activity before transmitting.

Press the monitor button to monitor the channel for activity. To avoid interrupting another user, make sure the channel is clear before you begin transmitting.

The tri-color LED located on the top panel can help with channel monitoring. It will glow amber if RF activity is present; or green if the transmission has a CTCSS tone that matches a tone programmed



## GMRS-50 Series Operations, Continued

for receive in your radio. When the LED is not illuminated, the radio is indicating a "clear" channel.

When the channel is clear, hold the radio upright with the antenna vertical and the front microphone area about 2-3 inches from the mouth, keeping the antenna away from the face and eyes. Press and hold the P-T-T bar on the side of the radio, and speak slowly and clearly into the microphone area.

**NOTE:** The LED will glow red when transmitting. This indicator should be on continuously while the P-T-T bar is being pressed and the radio is transmitting. Should the red LED be "flashing", the battery needs to be recharged and transmission will cease. Recharge the battery before attempting more than one transmission.

### To Receive

When you have finished transmitting, release the P-T-T bar to receive.

## Status Indicators and Audible Alert Tones

Your GMRS-50 radio has a sophisticated microprocessor control which provides a series of audible alert tones. Upon initial power up, a single tone indicates that the self-test of the microprocessor functions has been completed satisfactorily. A tone, or series of tones, may be sounded with any of the following conditions:

- Attempt to transmit on a channel set for receive only
- Transmitting time has exceeded time-out timer time of 5 minutes of continuous transmitting
- Low battery condition
- Selecting a channel with no frequency programmed on it

See the Status Indicators and Audible Alert Tones chart on next page for full detail.

## Status Indicators and Audible Alert Tones

| STATUS  | DESCRIPTION         | LED COLOR       | AUDIBLE TONE        |
|---------|---------------------|-----------------|---------------------|
| NORMAL  | Power On - Ready    | N/A             | Single tone         |
|         | Busy Channel        | Amber           | N/A                 |
|         | Correct all w/ tone | Green           | N/A                 |
|         | Transmit            | Red             | N/A                 |
| SCAN    | Scan is initiated   | Green, flashing | N/A                 |
| WARNING | Time-Out Timer      | N/A             | Single tone         |
|         | Battery Low         | Red, flashing   | Four beeps, repeat  |
| ERROR   | EEPROM Error        | Red, flashing   | Single beep, repeat |
|         | PLL Error           | Red, flashing   | Double beep, repeat |
|         | Filtering Error     | Red, flashing   | Triple beep, repeat |

## Accessories

The Maxon GMRS-50 radio is designed to work with a variety of accessory products, including:

|            |  |
|------------|--|
| QPA-1200G* | 1200 mAh Ni-Cad Battery Pack                             |
| CA-1410C   | AC/DC Wall Trickle Charger                               |
| QPA-1130   | Dual Slot/Dual Rate Desktop Charger<br>with Power Supply |
| QPA-1135*  | Desktop Charger  |
| QPA-1425   | Lapel Speaker/Microphone                                 |
| QPA-1480   | Voice Operated/P-T-T Mini-VOX Headset                    |
| QPA-1491   | Heavy Duty Leather Case                                  |
| QPA-1496C  | Camouflage Canvas Case                                   |
| SPK-400C   | Programming Kit (required for CTCSS)                     |

\* Comes standard with the GMRS-50 radio.

These accessories can be purchased from your local Maxon Dealer, or you may contact Topaz3 at 816/891-6320, ext. 705.

## Pre-Programmed Frequencies

Your GMRS-50 radio comes pre-programmed on the following frequencies:

|          |                                    |
|----------|------------------------------------|
| 462.5500 | GMRS Channel 1                     |
| 462.5750 | GMRS Channel 2                     |
| 462.6000 | GMRS Channel 3                     |
| 462.6250 | GMRS Channel 4                     |
| 462.6500 | GMRS Channel 5                     |
| 462.6750 | GMRS Channel 6                     |
| 462.7000 | GMRS Channel 7                     |
| 462.7250 | GMRS Channel 8                     |
| 462.5625 | FRS Channel 9 / GMRS Interstitial  |
| 462.5875 | FRS Channel 10 / GMRS Interstitial |
| 462.6125 | FRS Channel 11 / GMRS Interstitial |
| 462.6375 | FRS Channel 12 / GMRS Interstitial |
| 462.6625 | FRS Channel 13 / GMRS Interstitial |
| 462.6875 | FRS Channel 14 / GMRS Interstitial |
| 462.7125 | FRS Channel 15 / GMRS Interstitial |
| SCAN     |                                    |

## Programmable Features

### Continuous Tone Coded Squelch System (CTCSS)

CTCSS is used to give you semi-private conversation by eliminating unwanted reception of signals on the same channel, but not programmed with the same CTCSS code. There are 38 standard tones you can program on any channel. An SPK-400C Programming Kit is required (sold separately) for programming CTCSS.

The **CTCSS** tones are as follows:

|      |       |       |       |       |       |
|------|-------|-------|-------|-------|-------|
| OFF  | 85.4  | 107.2 | 136.5 | 172.8 | 225.7 |
| 67.0 | 88.5  | 110.9 | 141.3 | 173.8 | 233.6 |
| 71.9 | 91.5  | 114.8 | 146.2 | 179.9 | 241.8 |
| 74.4 | 94.8  | 118.8 | 151.4 | 186.2 | 250.3 |
| 77.0 | 97.4  | 123.0 | 156.7 | 203.5 |       |
| 79.7 | 100.0 | 127.3 | 162.2 | 210.7 |       |
| 82.5 | 103.5 | 131.8 | 167.9 | 218.1 |       |

## **Programmable Features, Continued**

### **Scan Mode**

The GMRS-50 allows for a channel scan function programmed onto Channel 16 only, (making the radio a 15 channel radio with scan). No channel frequency may be programmed onto Channel 16 with scan. The scan function will scan all programmed channels (Channel 1 - 15).

To initiate the scan mode, (when programmed), turn the channel selector knob to Channel 16 position - the radio will start to scan. The top panel LED will flash green as the radio is scanning.

If conversation is detected on any channel, the radio will stop on that channel and you will be able to hear the conversation. You will be able to transmit (TX) on that active channel during the scan delay time of 5 seconds. Scan delay time is the amount of time the radio will stay on a channel once activity has ceased. The radio will resume scanning once the scan delay time has expired. Scanning will continue until the channel is changed.

## **Recycling/Disposal of Batteries**

The U.S. Environmental Protection Agency (EPA) classifies used Ni-Cd batteries as hazardous waste, unless certain exemptions apply.

The battery should be recycled at the end of its useful life. Under various state or local laws, such batteries must be recycled or disposed of properly and cannot be dumped in landfills or incinerators.

A national program to collect and recycle used Ni-Cd batteries is being implemented by the Rechargeable Battery Recycling Corporation (RBRC™).

The following is a list of facilities where the batteries can be shipped

## **Recycling/Disposal of Batteries, Continued**

to be recycled. Contact these facilities for proper packaging and shipping guidelines.

### **INMETCO**

245 Portersville Road  
Ellwood City, PA 16117  
Tel: 724-758-2800  
Fax: 724-758-2845

### **KINSBURSKY BROTHERS INC.**

1314 N. Lemon Street  
Anaheim, CA 92801  
Tel: 714-738-8516  
800#: 800-548-8797  
Fax: 714-441-0857

## **Radio Maintenance/Service**

Your GMRS-50 Series radio is designed to be maintenance free. To keep your radio in good working condition:

Clean external surfaces with a clean cloth dampened in a solution of dishwasher detergent diluted in water. Apply the solution sparingly to avoid any moisture leaking into cracks and crevices. Do not submerge the radio. Use a non-metallic brush to dislodge stubborn particles, if necessary. Dry the surface thoroughly with a soft, lint free cloth.

DO NOT use solvents or spirits for cleaning - they may permanently damage the housing.

Clean the battery contacts on the back of the radio with a lint free cloth to remove dirt, grease, or other foreign material that may impede good electrical contact.

DO NOT tamper with internal adjustments. Damage to the equipment and/or improper operation may result. There are not user serviceable items inside the radio.

It is recommended that you return your radio to the place of purchase for any service or repairs, or call Topaz3 direct at: 816/891-6320, ext. 499.

## Software Copyrights

The Maxon product(s) described in these operating instructions may include copyrighted Maxon software programs stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Maxon certain exclusive rights for copyrighted software programs, including the exclusive right to copy or reproduce in any form the copyrighted software program. Accordingly, the copyrighted Maxon software programs contained in the Maxon products described in this operating instruction manual may not be copied or reproduced without the express written permission of Maxon. Furthermore, the purchase of Maxon products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of Maxon, except for normal non-exclusive royalty free license to use that arises by operation of law in the sale of a product.

## Warranty Service Instructions

Refer to the Operating Instructions section of this Owner's Manual for proper operation and adjustments.

If the problem cannot be corrected by reference to this Owner's Manual, return the product with proof of purchase (a sales receipt) to the place of purchase, or call the Customer Service Department for assistance, 1-800-821-7848, Ext. 499.

### **FOR YOUR RECORDS**

**Purchase Date:**

\_\_\_\_\_

**Purchased From:**

\_\_\_\_\_

**Serial Number:**

\_\_\_\_\_

**KEEP THIS INFORMATION IN A SAFE PLACE.**

## Product Warranty

Topaz3 warrants that the Products and included accessories sold herein will be free from defects in workmanship or materials under normal use and service for a period of one (1) year from the date of purchase by the original end user, provided that the buyer has complied with the requirements stated herein. This warranty is offered to the initial end user and is not assignable or transferable. Topaz3 is not responsible for any ancillary equipment which is attached to or used in conjunction with Maxon products.

If the Product fails to function under normal use because of manufacturing defect(s) or workmanship during the one (1) year period following the date of purchase, it will be replaced or repaired at Topaz3's option at no charge when returned to the place of purchase. The defective unit must be accompanied by proof of the date of purchase in the form of a sales receipt.

The sole obligation of Topaz3 hereunder shall be to replace or repair the Product covered in this Warranty. Replacement, at Topaz3's option, may include a similar or higher-featured product. Repair may include the replacement of parts or boards with functionally equivalent reconditioned or new parts or boards. Replaced parts, accessories, batteries, or boards are warranted for the balance of the original time period. All replaced parts, accessories, batteries or boards become the property of Topaz3.

Topaz3 shall have no obligation to make repairs or to cause replacement required through normal wear and tear or necessitated in whole or in part by catastrophe, fault or negligence of the user, improper or unauthorized alterations or repairs to the Product, use of the Product in a manner for which it was not designed, or by causes external to the Product. This warranty is void if the serial number is altered, defaced or removed.

The user is responsible for the payment of any charges or expenses incurred for the removal of the defective product from the vehicle or site of its use, for the transportation of the product to the place of repair, for the return of the repaired / replaced product to the site of its use and for the reinstallation of the product.

**THE EXPRESS WARRANTIES CONTAINED HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

**FOR ANY PRODUCT WHICH DOES NOT COMPLY WITH THE WARRANTY SPECIFIED, THE SOLE REMEDY WILL BE REPAIR OR REPLACEMENT. IN NO EVENT WILL TOPAZ3 BE LIABLE TO THE BUYER OR ITS CUSTOMERS FOR ANY DAMAGES, INCLUDING ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, OR FOR THE LOSS OF PROFIT, REVENUE OR DATA ARISING OUT OF THE USE OF OR THE INABILITY TO USE THE PRODUCT.**

This warranty is void for sales and deliveries outside of the U. S. A.

***For more information, contact:***  
**Topaz3, LLC**  
**10828 NW Air World Drive**  
**Kansas City, Missouri 64153**

(Within USA) Phone: 1-800-821-7848, Ext. 399  
(Outside USA) Phone: 1-816-891-6320, Ext. 399  
Fax: 816/891-8815

***Explore our website:***  
***[www.topaz3.com](http://www.topaz3.com)***