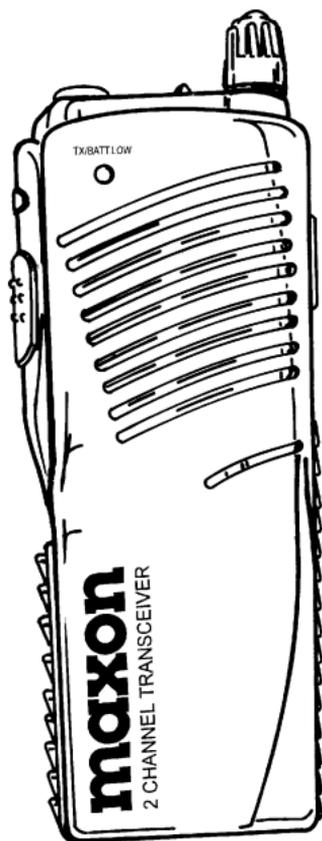


GMRS-21X

Synthesized GMRS Two-Way Radio

Owner's Manual



maxon[®]

A World of Communications

About Your GMRS-21X Radio

Congratulations on your purchase of a Maxon GMRS-21X two-way radio. The radio features two channel operation, 1 Watt output power and superior performance. Operation and functions for your radio are described in this manual. We urge you to thoroughly read this manual before operating the radio.

GMRS-21X Features

2 Operating channels

1 Watt RF output power

Automatic squelch (keeps your conversations clear)

Rechargeable Ni-Cad battery pack

Alkaline battery housing (allows use of Alkaline batteries for power if desired)

Dual-color LED indicator (indicates transmit and busy conditions)

Package Contents

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

Radio Transceiver Unit ● Rechargeable Ni-Cad Battery Pack ● Alkaline Battery Pack Shell ● Antenna ● Desktop Charger ● Charger Power Supply ● Belt Clip ● Operating Instructions

If any items are missing, please contact the place of purchase or Maxon America, Inc.

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Safety Information

The Federal Communications Commission (FCC), with its action in General Docket 79-144, March 13, 1985, has adopted a safety standard for human exposure to Radio Frequency (RF) electromagnetic energy emitted by FCC

Safety Information, Continued

regulated equipment. Maxon subscribes to the same safety standard for the use of its products. 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 any 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 specifically designed and qualified for such use.

CAUTION - DO NOT press and hold the transmit switch (P-T-T button) 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-21X, 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-21X operates on General Mobile Radio Service (GMRS) frequencies, which are allocated by the FCC for personal uses, including recreation and travel.

For GMRS radio licenses, you must submit FCC Form 574 directly to the FCC at this address:

Federal Communications Commission
General Mobile Radio Service
PO Box 358230
Pittsburgh, PA 15251-5230

To obtain current FCC Forms and/or 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-On-Demand System by calling 1-202-418-0177.

For more information regarding the licensing application, contact the FCC at 1-888-CALL-FCC (255-5322).

You are required to have in your possession a current copy of Part 95 of the FCC Rules and Regulations before operating your radio. It is your responsibility to insure your radio

FCC Licensing Information, Continued

operates in accordance with the guidelines established by the FCC and that you are familiar with Part 95 of the FCC Rules before you operate your radio. To obtain current copies of the FCC Rules and/or Part 95, contact:

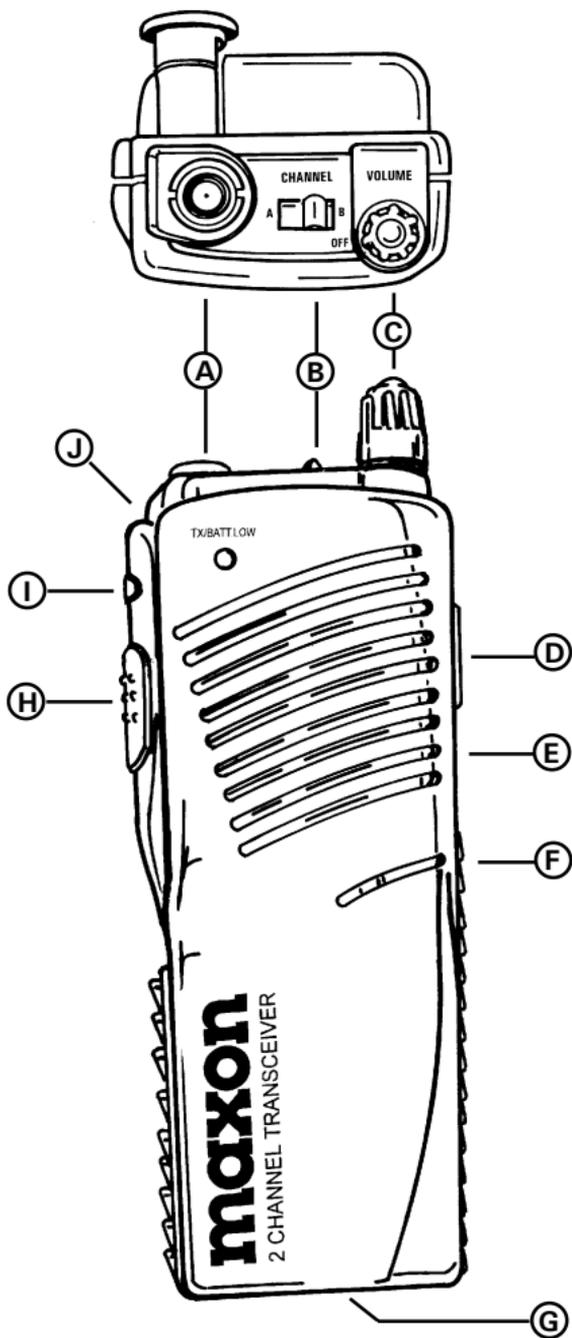
Superintendent of Documents
Government Printing Office
Washington, DC 20402-9371

or call: 1-202-783-3238 (8:00 AM to 4:00 PM Eastern Standard Time, Monday - 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 locations.

Radio Controls/Functions

- A Antenna Receptacle
- B Channel Selector Switch
- C On/Off - Volume Control
- D Accessory Jack
- E Speaker
- F Microphone
- G Battery Release Latch
- H Push-To-Talk Bar
- I Monitor Button
- J TX/Battery Low LED
- Belt Clip (not shown)
- Battery Contacts (not shown)



Battery Charging and Care

The Ni-Cad battery pack must be fully charged (or new Alkaline batteries inserted into the alkaline battery pack shell) to obtain maximum performance from your radio. A desktop charger is provided with the GMRS-21X radio. You can charge the provided Ni-Cad battery pack while attached to the radio in the front charging slot, or the Ni-Cad battery alone in the rear charging slot. The charging cycle is overnight (12-16 hours). While charging in either slot a solid red LED will appear on the charger base.

NOTE: Charge only the provided Ni-Cad battery pack.

To receive maximum performance from your radio and Ni-Cad battery, periodically discharge the pack completely and then recharge it.

Antenna Installation

Fasten the antenna to the radio by turning the antenna clockwise into the receptacle on top of the radio until firmly seated. Do not overtighten.

Installing and Removing a Battery Pack

To load fresh Alkaline batteries into the alkaline battery shell, slide the internal holding clip toward the end of the shell and remove it. Load 4 new "AA" Alkaline batteries, following the polarity diagram embossed in the shell base. Realign the holding clip along the shell sides and reposition to hold the batteries securely.

Installing and Removing a Battery Pack, Continued

To install the Alkaline or Ni-Cad battery pack, hold the radio face down in one hand; the battery pack (flat side up) in the other. Orient the battery so that the 2 metal battery contacts are toward the bottom of the pack. Locate the tab at battery top and the slot at radio top panel. Turn the battery pack over in your hand, and tilt the tab end slightly downward to insert it into the slot. Lower opposite end of battery toward radio and press firmly until a click is heard and battery pack is firmly seated.

To remove either pack from the radio, hold the radio face down in one hand and use the thumb of other hand to press and hold the battery latch (at the battery pack base). Use gentle upward pressure to raise the battery about 1/2" from the radio back. Lift and pull the battery pack away from the radio, being careful not to break or put pressure on the battery pack tab.

Attaching and Removing the Belt Clip

The belt clip attaches to the upper right corner of the radio back. To attach, position the belt clip so that the deep slotted area faces the holder on radio back. Insert the holder into the slot, and slide the belt clip upward. A click will be heard, confirming the belt clip is firmly seated on the holder. Open belt clip (by pressing top of clip) and attach to belt, pocket or other convenient location.

To remove the belt clip, simply push and hold the release button (located at the top of the belt clip) while sliding the belt clip down off the holder on radio back.

GMRS-21X Operation

Power On-Volume:

Turn the radio on by rotating the on/off - volume control clockwise until you hear a click. Continue to move the control until a desired listening level is obtained.

Transmit:

CAUTION!

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

Using the switch at the top of the radio, select the desired channel - Channel A (462.575 MHz) or Channel B (462.625 MHz).

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.

NOTE: Federal Communications Commission Rules and Regulations require that you monitor a channel for activity before transmitting.

NOTE: When the radio's top-mounted LED is not illuminated, the radio is indicating a "clear" channel. It will glow amber if activity is present.

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

GMRS-21X Operation, Transmit, Continued

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. The LED will glow red when transmitting. When you have finished transmitting, release the P-T-T bar to receive.

NOTE: Should the LED be flashing red, the battery needs to be recharged. Your transmission will cease. Recharge the battery pack (or install fresh Alkaline batteries to the Alkaline battery pack shell) before attempting more than one transmission.

Power Off:

When finished transmitting, receiving, monitoring, etc., turn the radio off by rotating the on/off-volume control fully counter-clockwise, to the detent position.

Radio Status Indicators

Your GMRS-21X has a sophisticated microprocessor control which provides a series of visual alert indications. Note the following color changes to the top-mounted LED on your radio.

Status	Description	LED Color
Normal	Power on - Ready	N/A
	Busy	Amber
	Transmit	Red
	Battery low	Red flashing
Error	Internal Error	Red flashing

Accessories

The Maxon GMRS-21X radio is designed to work with a variety of accessory products, including:

ACC-600	Ear Bud Speaker
ACC-705	Ear Bud Speaker with in-line P-T-T and Microphone
ACC-725	Lapel Speaker / Microphone with Ear Jack

Your GMRS-21X comes standard with the following accessories. They are also sold separately as replacements or additional parts.

ACC-100	Stud Mount Antenna
ACC-210	Ni-Cad Battery Pack
ACC-211	Alkaline Battery Pack Shell
ACC-402	Desktop Charger
ACC-1402	Charger Power Supply

These accessories are available from your local Maxon supplier or you may contact Maxon at 800-821-7848, Ext. 319 for ordering information and pricing.

Recycling/Disposal of Batteries

The U.S. Environmental Protection Agency (EPA) classifies used Ni-Cad 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

Recycling/Disposal of Batteries, Continued

recycled or disposed of properly and cannot be dumped in landfills or incinerators.

Maxon America, Inc. fully endorses and encourages the recycling of Ni-Cad batteries. A national program to collect and recycle used Ni-Cad batteries is being implemented by the Rechargeable Battery Recycling Corporation (RBRC™). This program is being funded through the use of license fees paid by the battery and product manufacturers to place the RBRC™ Seal on the batteries.

The following is a list of facilities where the batteries can be shipped to be recycled. Contact these facilities for proper packaging and shipping guidelines.

INMETCO
245 Portersville Road
Ellwood City, PA 16117
Tel: 412-758-2800
Fax: 412-758-2842

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-21X 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 radio battery contacts 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 no user serviceable items inside the radio.

It is recommended that you return your radio to the place of purchase for any service or repair, or call Maxon's Customer Service Department at: 800-821-7848, Ext. 499. Mention model GMRS-21X.

Radio Specifications

Operating Channels	Two: Channel A (462.575 MHz), Channel B (462.625 MHz)
RF Output Power	1 Watt
Power Supply	Rechargeable Ni-Cad pack, 6V DC Alkaline pack, 4 "AA" cells
Battery Life	10 hours at 90% Standby, 5% Receive, 5% Transmit time
Operating Temperature	-22° F to +140° F (-30° C to +60° C)
Speaker Impedance	8 Ohm
Frequency Control	Phase Locked Loop Synthesizer

Other Maxon Products

FRS-114	This compact Family Radio Service (FRS) radio features 1/2 Watt output power and a communication range of up to 2 miles. Provides license-free operation on one of 14 channels.
49-FX	Unique ear speaker/microphone receives and transmits your conversations - no headset is required. Belt-worn design has 5 channel operation with up to 1/8th mile communication range.
HCB-40WX	Slim-design handheld CB radio offers 40 channel operation and receives current broadcasts from the National Weather Service on one or more of 10 frequencies.

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 Maxon's 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.**

Limited Warranty Statement

The Consumer Products Division of Maxon America, Inc. (herein referred to as "Maxon") warrants that its Products and their included accessories will be free from defects in workmanship or materials under normal use 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.

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 Maxon'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.

Maxon's sole obligation hereunder shall be to replace or repair the Product covered in the above Warranty. Replacement, at Maxon'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 Maxon America, Inc.

Maxon shall have no obligation to make repairs or to cause replacement required which results from normal wear and tear or is necessitated in whole or in part by catastrophe, fault or negligence of the user, improper or unauthorized alterations, 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 purchaser shall provide for removal of the defective Product and installation of its replacement. *(Continued, next page)*

Limited Warranty Statement, Continued

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 MAXON 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 United States.

About Maxon America, Inc.

Maxon America, Inc. is a world leader in the design and manufacture of portable and mobile CB radios, Family Radio Service (FRS) radios, 49 MHz two-way radios, GMRS/DOT frequency radios, weather monitors, professional FM two-way Land Mobile Radios, Specialized Mobile Radios, RF link modules, Wireless Local Loop devices and portable two-way voice mail handsets; plus a variety of compatible accessory items.

Explore our website: **www.maxonusa.com** to learn more about our products, and to place orders on-line.

Thank you for choosing Maxon!

**For more information, contact:
Maxon America, Inc.
Consumer Products Division
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
e-mail: market@maxonusa.com**

***Explore our website:
www.maxonusa.com***