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## GMRS Radios.....

are available at a variety of price levels ranging from under \$50 to over \$500. The prices vary depending on power, number of channels, battery type/operating life, flexibility, reliability, and support/warranty. In essence, you can say that there are three basic types – toys, consumer, and professional grade. We deal only in professional grade communications. We've been in the communications business for close to half a century and we would like to be around when you need us! Now, let's look at each of the aforementioned considerations and see how the SLX400 by Ritron, Inc. stacks up.



### Technical features of the Ritron SLX400

Power – Up to 4 watts (Full specs at [www.info4u.us/slx.pdf](http://www.info4u.us/slx.pdf))

Number of channels – Up to 60

Battery Type – Lithium-Ion rechargeable with rapid desk charger

Channel selection – PC programmable including GMRS, Amateur, Business and Public safety as required and authorized in the 406-470 MHz frequency range.

Range – Up to 26 miles (One hot air balloon to another at altitude...)

### Manufacturers

You'll find many of the suppliers of electronic consumer grade products offering GMRS products. These include Audiovox, Cobra, Midland, Motorola, and Uniden as well as *power retailers* such as Best Buy, DAK, and Radio Shack with many offering outrageous claims for operating range. We place these products mainly in the toys and consumer grade category. HYT, ICOM, Ritron, and TEKK have versions of commercial grade radios that are suitable for GMRS use, all of which are available from Falcon Direct. Commercial grade manufacturers offer mobiles, base stations and repeaters as well as portables.

### Types of GMRS Radios

There are three types of GMRS radios – the standard radio with internal frequencies programmed by the manufacturer that cannot be changed. Most professional grade radios are available with optional PC programming kits that allow user programming for repeater operation and/or use of amateur (HAM), business, or public safety frequencies (with proper licensing and/or authorization as applicable). Lastly, there is the so called combo radio – a 22 channel version with both GMRS and FRS frequencies internally programmed. These radios use a fixed antenna as required by FRS rules and operate at reduced power in the FRS mode. Some suppliers will tell you that commercial or professional grade radios can be operated on FRS frequencies – Not so, if the radio has a removable antenna!

## A word about power

Portable radios are generally limited to no more than 5 watts in the UHF frequency range for two reasons. One is battery drain, the other being a still unresolved health issue dealing with potential hazards of RF radiation along with regulations by the FCC, OSHA, and the Food and Drug Administration. Most manufacturers offer 4 watts as a safe and effective maximum power output. Having said that, 4 watts is 4 watts regardless of brand or price, but there is more to determining range than power.

HEIGHT is the number one factor in determining range, closely followed by structural density, receiver sensitivity, antenna efficiency, and power in that order.

## Channel capacity

The Ritron SLX400 sold by Falcon Direct is preprogrammed with all GMRS channels. There are 16 frequencies available for GMRS use with eight for simplex and repeater outputs, eight for repeater inputs. Inputs and outputs are usually paired 5 MHz apart, but any pairing of an input and output frequency is permissible. CTCSS (Continuous Tone Coded Squelch System) is normally used on repeaters with a tone of 141.3 being the most common for GMRS.

We program 8 channels for standard paired frequency operation (i.e. 462.550 receive and 467.500 transmit for the first channel with a CTCSS code of 141.3 Hz plus the ability to switch to simplex operation with or without CTCSS tone on the receive frequency (simplex 462.550).

We program the second channel on the second repeater pair (462.575/467.575 with a CTCSS tone of 141.3, a third channel on 462.600/467.600 with a CTCSS tone of 141.3, a fourth channel on 462.625/467.625 with a CTCSS tone of 141.3, a fifth channel on 462.650/467.650 with a CTCSS tone of 141.3, a sixth channel on **462.675/467.675 with a CTCSS tone of 141.3 (This is the defacto nationwide "travel channel")**, a seventh channel on 462.700/467.700 with a CTCSS tone of 141.3, and an eighth channel on 462.725/467.725 with a CTCSS tone of 141.3. The next 8 channels are programmed on the repeater input simplex channels of 477.550, 468.575, 467.600, 467.625, 467.650, 467.675 and 467.600 with no CTCSS tones.

This programming setup allows you to operate on all 16 GMRS channels without CTCSS as well as eight repeaters with CTCSS tone protections. On request, we will change the CTCSS tones used on the repeater pairs at no charge. You now have 44 channels left over to program as you choose using an optional \$129 PC programming kit. With 60 channel capacity and an affordable PC programming kit, the Ritron SLX400 is in a class by itself.

## Battery/Operating Life



Don't expect a long operating life from a radio that operates from a couple of AA batteries. If the radio doesn't have rechargeable batteries, you need to open an account with your local battery store. If the radio doesn't have Lithium-Ion batteries, be prepared to frequently replace batteries as a result of *memory effect*.

The Ritron SLX400 has an 1800 mAh Lithium-Ion battery that will easily provide ten hours service or more per charge under normal operating conditions. The rapid desk charger fully charges a depleted battery in only 2.5 hours and it can charge a spare battery as well. You don't find this kind of capability in a toy or consumer GMRS radio or even in some of the commercial radios.

## **Flexibility/Reliability**

The SLX400 covers the entire 406-470 MHz band which means it can be programmed not only on GMRS channels, but UHF Amateur, Business, and Public Safety channels as well. A built in scrambler allows you to *go private* when talking to another associate or family member.

The SLX400 is designed for rugged use with certification both for MIL-SPEC 810 and IP54 which means you can use it fully exposed in the rain for up to 30 minutes without damage. The SLX400 is built to perform and withstand rough usage. It doesn't come in camo colors. Hope that's OK. Never could figure out why someone would want a radio to use in the woods that you can't find if you drop it.....

## **Support/Warranty**

Nobody provides better customer service or support than Falcon Direct – nobody, no time, nowhere ever! The information contained herein is a good example. Who else provides such information? We haven't seen them! Better yet, we support you AFTER the sale and we'll be here when you need us. We've been doing it longer than just about anyone else, anywhere in the USA or the world!

The Ritron one year factory warranty is a no nonsense program that takes care of you. No quibbling, no exclusions. Ritron is an American company with a commitment to take care of YOU!

## **Pricing**

The SLX400 is just \$259 plus shipping. Options, accessories, and ordering information is available at [www.usa-radio1.com/prices/slx](http://www.usa-radio1.com/prices/slx). You can use our on-line order form or just give us a call 24/7 at 800.489.2611.

## **A word about the FCC**

The General Mobile Radio Service is one of the fastest growing and least understood of all the radio services used in the United States! It is NOT an unlicensed service and it is NOT for business use. Those who tell you otherwise are either woefully uninformed or simply don't care that they could be placing unauthorized users in violation of FCC Rules and penalties that could involve potential fines, forfeiture of privileges, and even imprisonment!

GMRS is for private non-commercial use. As an individual, you are required to apply for a license (\$75 fee covers a five year authorization). The best source for information that we've seen is at [http://en.wikipedia.org/wiki/General\\_Mobile\\_Radio\\_Service](http://en.wikipedia.org/wiki/General_Mobile_Radio_Service). If you are planning to purchase a GMRS radio for business use – DON'T! If you are looking a GMRS for personal use, we recommend the Ritron SLX400 above all others. If you have a need for a mobile, base station, or repeater; call us at 1.800.489.2611.

## **Summing it all up**

Thanks for visiting with us. We look forward to serving you!

The Falcon Team  
*At your service!*

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