

R3EMCOMM Presents...



FRS/GMRS Basics and Neighborhood Radio Watch

Mountain Brook Estates Homeowners Association

What is R3EMCOMM?

R3EMCOMM stands for Rappahannock-Rapidan Regional (R3) Emergency Communications (EMCOMM). We are a volunteer organization primarily composed of Ham Radio Operators who believe that emergency communication skills and abilities are important. We support local governments and organizations “When All Else Fails” with communications assistance and work to promote Ham Radio as a hobby and lifetime activity.

The Big Question...

How will you know if your family is safe if cell phone and Internet services fail and you can't reach your loved ones or call 911 or emergency services?

The Solution... Radio For The Rest Of Us

We can help you and your family learn to communicate with radios for fun, while hiking or camping, but more importantly, when cell phones, the Internet, and the power is off!

No matter how big or small your “neighborhood” is, radio for the rest of us means just what it says - and you can be a part of it!

Presentation Topics

Why Prepare

What is FRS and GMRS

Neighborhood Radio Watch Safety-Nets and Event-Watch Nets

Q&A With Ham Radio Operators

Hands on Practice

Why Prepare?

We hear it all the time...

Why do I need a radio? I have a cell phone!

A recent survey found that 68.0% of adults and 79.1% of children lived in wireless-only households. With so many depending entirely on wireless, there will be a time when it does not work.

What will **YOU** do?

Virginia Is Not Immune To Disaster

Between 1953 and 2019, Virginia declared 67 major disasters, most of which were severe storms and hurricanes. Virginia is also home to tropical and winter storms, floods, wildfires, tornadoes, extreme heat and drought, and even landslides and earthquakes. Just ask the thousands of people that lost power during Winter Storm Freda in January 2022, or perhaps even just last weekend!

What About You?

What will **you** do

when the traditional means of communication

no longer work?

Why Use Radio?

First, they are time tested and they reliable!

Second, when the power is out, and cell phones and the Internet are down, having a simple handheld radio to communicate with friends and neighbors can be a real lifesaver.

Tell Me More About Radios

Well... there are a lot of radios to choose from!

The most common ones are CB, FRS, GMRS, and MURS.

After that, it's Amateur Radio (VHF, UHF, HF, P25, Microwave, Digital).

To keep it simple, we are going to focus only on two - FRS and GMRS.

Family Radio Service

FRS is a private, two-way, short-distance voice and data communications service for facilitating family and group activities.

The most common use for FRS channels is short-distance, two-way voice communications using small hand-held radios that are similar to walkie-talkies.

It works, but we don't often recommend it!

Sample FRS Radio

Midland - X-TALKER T51VP3

22 Channel FRS Two-Way Radio

Extended Range Walkie Talkies

38 Privacy Codes, NOAA Weather Alert

Approximately \$39.99 Pair



General Mobile Radio Service

Like FRS, GMRS is for “normal” people.

There are up to 22 channels with 8 repeater channels.

You can listen on all 22 channels (along with FRS, the “low power” cousin).

You can transmit on all 22 channels (some exceptions apply).

But... not all radios are equal (cost, number of channels, and transmit power).

Sample GMRS Radio

BAOFENG GM-15 Pro

NOAA Weather Receiver & Scan

GMRS Repeater Capable

Rechargeable with USB-C Charger

About \$29.00 Each



GMRS Basics

GMRS is line of sight (Point A to Point B).

Transmit power varies from 2 watts or less to a maximum of 50 watts.

Range varies from ½ mile to 30 miles or more.

There are two transmission modes - Simplex and Repeater.

Do you want to know more?

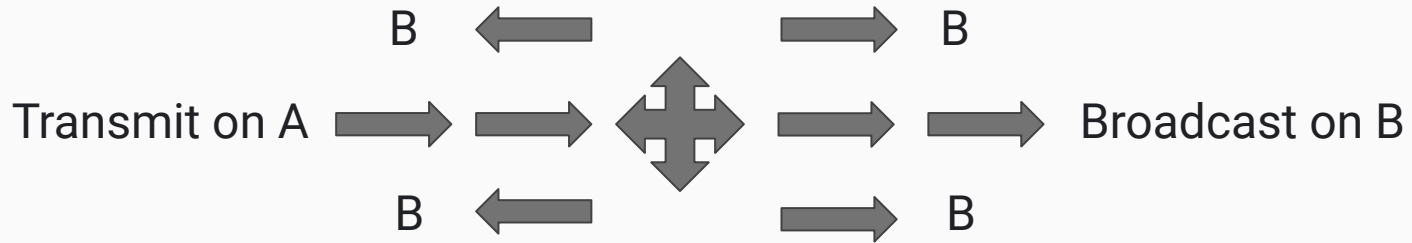
Simplex is Simple

Simplex is simply point to point,
using the same transmit and receive frequency,
typically from one radio operator to another.



Repeaters Are More Complex

Repeater signals are transmitted from the sender and are rebroadcasted, like the spokes on a wheel, using different frequencies for transmit and receive.



Repeaters offer greater range than simplex, as their signals are rebroadcasted.

GMRS Rules

There are a few rules, and they are pretty easy to follow...

Transmit your call sign every 15 minutes.

Transmit your call sign at the end of every transmission.

Be nice, be polite, and always pretend that your mother is listening!

GMRS Licensing

A \$35.00 GMRS “family” license is required.

You and your immediate family (spouse, children, grandchildren, stepchildren, parents, grandparents, stepparents, brothers, sisters, aunts, uncles, nieces, nephews, and in-laws) can use the same license.

Family members do not need to live in the same household to be covered by your GMRS license, all members of the family must use the same GMRS call sign, and the license is good for 10 years.

Neighborhood Safety-Nets and Event-Watch Nets

What is a Net?

It's like a meet and greet using a radio!

There is a Net Control Operator (also known as a Host).

Nets occur once a week or are based on a schedule of your choosing.

Once a quarter there is a "big picture" net with Ham Radio Operators.

Technical assistance and support can be provided as needed.

Practice is what makes the difference!

How R3EMCOMM Can Help

We can help you...

Determine what radio or radios are best for your use.

Provide documentation and resources to help you establish your own Neighborhood Radio Watch.

Provide technical support and monitor your progress.

Provide additional information on how to become a ham radio operator.

Take a Break

Stand Up!

Ask questions!

Come check out our sample radios!

Want to become a Ham Radio Operator - Just ask!

Our Volunteer Presenters

Bob Segrest - K02F

Jeff Davis - KE4WKX

Jeff Loeffler - KB4DTU

Mike Murphy - KD7PUF

The Fine Print

Neighborhood Radio Watch programs **ARE NOT** a replacement for emergency services such as Police, Fire, the Sheriff's Office or 911. Neighborhood Watch programs are intended solely as a backup communications solution "**When All Else Fails.**" The knowledge and skills learned, however, can contribute to enhanced communication for individuals, families, groups, and neighborhoods and serve as a gateway to the hobby of Amateur Radio.

Rappahannock-Rapidan Regional Emergency Communications (R3EMCOMM) is a "not-for-profit" volunteer community service organization. Members are not reimbursed for their membership or for services provided to the community. Radio programming and training workshops are provided by our members free of charge. If you need help installing equipment, unpaid volunteer assistance may be available. Donations to R3EMCOMM are gratefully accepted but are not required nor expected.

For More Information

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