

DexNet

Communications Plan v1



DexNet Purpose

The purpose of DexNet is to provide a set of communication plans/guidelines in case of any emergency. This may be a power outage situation or complete grid down. This can be used amongst your family, close group of friends or your community.

FRS (Blister Pack)

FRS radios are the radios that can be picked up in any big box store and typically come in a pack of two. These radios do have a very limited range and are best used for communications within a small neighborhood or community. Maximum power output of these radios is 2 watts or less. FRS radios uses 22 channels and its frequencies are shared with GMRS radios. The frequencies for these channels are set by the FCC. These radios do offer a tone that can be used to only hear another radio using the same tone. However, when mixing different brands it is best to have this off to ensure they work together.

For the best range it is recommended to use channels 15-22. If you and others within your neighborhood decide to use these for communications, choose a channel that you confirm works between the radios you have. Write that channel below just in case.

FRS Channel _____

(NOTE: All FRS/GMRS channels, frequencies and allowed power can be found in Appendix A at the end of the comms plan.)

GMRS (License Req.)

GMRS radios can be found in both hand held and base station style radios that can be found in some big box stores. These radios will cost more than the previous radios in some occasions, however allow more power to transmit and thus require a license via the FCC. The license is a monetary fee and the license is good for 10 years. Typical range on a GMRS radio can be around 1 and a half miles. The advertised range on these radios is for ideal conditions and direct line of site. Handhelds transmit typically 6 watts or less while base stations can transmit up to 50 watts. However you can only use 50 watts on channels 15 thru 22. Additionally, there are 8 repeater frequencies for GMRS that can be used up to 50 watts as well.

For the best range it is recommended to use channels 15-22. If you and others within your neighborhood decide to use these for communications, choose a channel that you confirm works between the radios you have. Write that channel below just in case. Also if you have a repeater in the area you will use to reach others, note that as well. With any repeater use you should ensure you have permission from the club that owns the repeater.

GMRS Channel _____

GMRS Repeater _____

(NOTE: All FRS/GMRS channels and their frequencies can be found in Appendix A at the end of the comms plan.)

Amateur/HAM Radio (License Req.)

Amateur/HAM radios can be found in many forms but only found in specialized stores. In order to get a license to operate one of these radios you are required to pass a test from the FCC. There are three levels to the license and each have its own test. For basic use on VHF/UHF you must pass the initial test for your general license. This will allow for the use of the VHF(144-148MHz) and UHF(420-450MHz) frequencies to be used for communications. Using base stations with bigger external antennas you are able to communicate at much greater distances. Also, with amateur radio the ability to use local repeaters will help further your reach. However, do note that using a repeater there will be others using and listening to repeaters.

Just like the previous radios, a frequency will need to be chosen in either the VHF or UHF band that works best between all involved. Choose a few frequencies and monitor them to ensure these are not in use by any other parties. It also would help to find any area band plans that lays out the local frequencies and their use. Once a frequency has been chosen, note it on the line below. Also there is a line to add a PL tone if one is also being used.

UHF/VHF Frequency _____

PL Tone _____

DexNet Activation:

DexNet can be activated by your group during any situation such as cell towers are down, phones, internet and power. In power outage situations and to conserve battery power only turn the radio on at the top of the hour and listen for 5 to 10 mins. If nothing is heard, turn the radio off and check back in at the top of the hour. It is good habit to always ensure your radio is charged and ready to go.

DexNet should be tested at minimum once a month with your communications group. Suggested schedules could be every Friday at 9PM or the first Monday of every month. This will be a simple check in to test radio is in working order and able to be used. This can be either a handheld or a base station. It is also good to test that you can use the handheld on battery, same as any base stations you may have. This is also a good time for any discussion of topics in relation to the net and other things you can test. Repetition of using your equipment is necessary to ensure that when the time comes you are able to use it with no issues. Also rotate who will run your net each night to take roll call and run the communication.

I have included a sample table where you can place in multiple times and days of when you will run your testing. Example for Every Friday at 9PM in the example above You would fill in Day - Friday, Time - 9PM, Repeats - Weekly.

Day	Time	Repeats

DexNet Helpful Tips:

Radio Talk:

When speaking on the radio there are some who will use short talk or say things a certain way. I have placed a short list of these common ones below.

Short Hand	Meaning	Short Hand	Meaning
Roger That	"Message received and understood"	Out	Conversation is finished, no answer is required or expected
Roger So Far	Confirming part way through a long message that you've understood	Radio Check	What's my signal strength? Can you hear me?
Affirmative	Yes	Read You Loud And Clear	Your transmission signal is good, I can hear you fine
Negative	No	Wilco	Abbreviation of "I will comply"
Come In	Asking another party to acknowledge they can hear you	Break, Break	Interruption to a transmission to communicate urgently
Go Ahead	I am ready for your message	Emergency, Emergency	Distress call, only to be used in imminent danger of life
Say Again	Repeat all of your last message	Stand By	Wait for a short period and I will get back to you
Say All Before/After	Repeat all before/after a certain phrase or word if you didn't catch the message	Wait Out	Waiting period is longer then expected
Over	Message finished, inviting others to respond if needed.	I Spell	The next word will be spelled out using the phonetic alphabet.

Ham Radio Short Talk:

Ham radio operators have their own set of short hand when it comes to speaking on the ham bands.

Term	Meaning	Term	Meaning
73	Cheers / Best Wishes	Homebrew	Home Made
Boat Anchor	Old Radio	Jump Off	Leave the Radio
HT	Handheld Transceiver	Kerchunck	Short Press On The PTT
PTT	Push-To-Talk button	Key Up	Transmit
QRM	Interference	Mobile	Traveling
QSL	Acknowledge / Confirm	Net	On-Air Gathering
QSO	Contact	Picket Fence	Fluttering Transmission
QSY	Change Frequency	Ragchew	Long Discussion
QTH	Location	Relay	Pass A Message
Clear	Off The Air	Roger	Agree
Copy	Understood	Rubber Duck	Short Bad Antenna
Double/Step On	Talk Simultaneously	Shack	Radio Room
Elmer	Mentor	Silent Key	Passed Away
Final	End of Transmission	Stand By	Wait
Full Quieting	No Background Noise	Unkey	Stop Transmitting

APPENDIX A:

FREQUENCY/CHANNEL CHART
FRS/GMRS Transceivers in the United States
As of September 28, 2017

Channel	Frequency MHz	Radio Service	Max Permitted Power		Detachable Antenna OK?	
			FRS	GMRS	FRS	GMRS
1	462.5625	FRS or GMRS	2 watts	5 watts	no	yes
2	462.5875	FRS or GMRS	2 watts	5 watts	no	yes
3	462.6125	FRS or GMRS	2 watts	5 watts	no	yes
4	462.6375	FRS or GMRS	2 watts	5 watts	no	yes
5	462.6625	FRS or GMRS	2 watts	5 watts	no	yes
6	462.6875	FRS or GMRS	2 watts	5 watts	no	yes
7	462.7125	FRS or GMRS	2 watts	5 watts	no	yes
8	467.5625	FRS or GMRS	.5 watts	.5 watts	no	no
9	467.5875	FRS or GMRS	.5 watts	.5 watts	no	no
10	467.6125	FRS or GMRS	.5 watts	.5 watts	no	no
11	467.6375	FRS or GMRS	.5 watts	.5 watts	no	no
12	467.6625	FRS or GMRS	.5 watts	.5 watts	no	no
13	467.6875	FRS or GMRS	.5 watts	.5 watts	no	no
14	467.7125	FRS or GMRS	.5 watts	.5 watts	no	no
15	462.5500	FRS or GMRS	2 watts	50 watts	no	yes
16	462.5750	FRS or GMRS	2 watts	50 watts	no	yes
17	462.6000	FRS or GMRS	2 watts	50 watts	no	yes
18	462.6250	FRS or GMRS	2 watts	50 watts	no	yes
19	462.6500	FRS or GMRS	2 watts	50 watts	no	yes
20	462.6750	FRS or GMRS	2 watts	50 watts	no	yes
21	462.7000	FRS or GMRS	2 watts	50 watts	no	yes
22	462.7250	FRS or GMRS	2 watts	50 watts	no	yes
15RP*	467.5500	GMRS	Prohibited	50 watts	Not Applicable	yes
16RP*	467.5750	GMRS	Prohibited	50 watts	Not Applicable	yes
17RP*	467.6000	GMRS	Prohibited	50 watts	Not Applicable	yes
18RP*	467.6250	GMRS	Prohibited	50 watts	Not Applicable	yes
19RP*	467.6500	GMRS	Prohibited	50 watts	Not Applicable	yes
20RP*	467.6750	GMRS	Prohibited	50 watts	Not Applicable	yes
21RP*	467.7000	GMRS	Prohibited	50 watts	Not Applicable	yes
22RP*	467.7250	GMRS	Prohibited	50 watts	Not Applicable	yes

*Midland MicroMobile repeater channel designations