

CLUB RULES

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Repeaters

The Chicago FM Club currently operates four repeater systems; a two meter multi-receiver system, two on-site 220 Mhz systems and one on-site 440 Mhz repeater.

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controller, Auto-Patch has been added to the Two-meter repeater and is available to members in good standing.

Another popular CFMC repeater operates on 222.50/224.10 Mhz. It too is a wide coverage machine, feeding a 10 Watt ERP (Effective Radiated Power) signal to an antenna with a 500 foot height. Located on Chicago's near-north side at North Avenue and LaSalle Street, it's coverage is nearly as good as that of the 2 meter repeater. A spotty average area however exists in a 20 degree arc due south of Chicago's downtown. Auto-Patch is also a feature of this machine.

A second 220 MHz repeater operates on 222.58/224.18 Mhz. Situated in Hazel crest, Illinois. at the South Suburban Hospital. This location affords an operational area limited to the south side of Chicago and nearby suburbs. A 30 Watt: ERP signal feeds an antenna at a height of 188 feet.

Finally, our 440 MHz repeater operates from the same location as our 2-Meter repeater on 448.75/443.75 MHz. A sub-audible tone (PL) of 114.8 HZ (tone 2A) is required to access this machine. This tone is used to prevent the high amount of RF present in the area from false keying the repeater. This system has generally good citywide coverage with its 80 Watt ERP signal. Auto-Patch is also a feature of this repeater.

FM History

If you are a newcomer to VHF-FM, and particularly if you have just arrived from one of Amateur Radio's other bands or modes, you are probably somewhat curious about the high degree of organization that has come about on our VHF bands. While space does not permit a complete history of Amateur FM, here is a brief explanation of the Amateur FM structure and how it came to be.

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the lack of readily available equipment. However, in the early 1960's the FCC required all commercial users of FM to switch to a new FM modulation technique. As a result, thousands of "obsolete" 150 MHz police, taxi, etc, radios appeared on the used equipment market, just begging for conversion to the Amateur two-meter band. Over the

course of time, many hams became active on two meter FM. Compared to today's synthesized radios, their equipment was very limited; crystal control of transmit and receive Frequencies was the order of the day, and lucky was the ham that had a radio capable of multiple frequency operation

Channelization (the setting aside of common frequencies upon which a station could communicate with another station) made the limitations of the early surplus FM equipment non-existent. Certain spacing was needed between channels to avoid adjacent channel interference, so at first a 60 KHz spacing was used (a practice borrowed from the nearby commercial band). Improvements in FM techniques eventually allowed this spacing to be reduced to 30 KHz, which allowed more channels in a given portion of the spectrum. And, in some areas of the country. this spacing is being reduced again to 15 KHz.

The channel concept has some advantages. Many FM'ers began listening on the popular channels with squelched receivers (known as monitoring) and a brief call was all that was needed to establish contact. Long CQ calls and tedious "tuning the band" was now an HF-only operation. Also, manufacturers of commercial radio equipment began to produce crystal controlled Amateur FM units, encouraged by the success of the channelization effort.

Today, versatile synthesized radios (From mobiles to that contain functions undreamed of 15 years ago) are a common sight. There are VHF repeaters operating from coast to coast in the United States, and many more throughout the world. VHF-FM is one of the most popular operating modes in Amateur radio .

TIPS

Every repeater system in operation, whether it be operated by CFMC or not, is operated according to a style peculiar to that system and its operators. Generally, before you begin to use an unfamiliar repeater you should listen to it for a short time before transmitting. This will give you time to figure out what peculiarities are in vogue on the repeater. Also, this allows you to ascertain whether or not the repeater system is being used (for example, an Emergency could be in progress, with the repeater being temporarily silent). On the CFMC systems in particular, the following tips will ensure smooth operation.

1 LISTEN FIRST: Always do this before beginning a call, mainly to determine whether or not the system is in use. This will save you the

embarrassment of interrupting a QSO already in progress (or even worse, an Emergency).

2 SHORT CALLS: In VHF (and especially repeater) operation, short calls to make initial contact between stations are much preferred to long calls (such as in HF operation). The reason for this is that no "tuning the band" is necessary for the stations to agree on a common frequency. The usual attempt, if ABC wishes to contact XYZ, would go something like this: "N9XYZ this is KA9ABC calling" Two short attempts, using the preceding as an example with pauses between each attempt, are better than one long call.

3 PAUSE BETWEEN TRANSMISSIONS: When In QSO, it's a good idea to leave a short pause (of about two seconds) between the ending of one station's transmission and when you are about to begin a transmission. This pause will allow stations that have a need (such as an Emergency) to "break in" to your QSO.

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could have an Emergency, always allow the "breaker" immediate access (even if it inconveniently interrupts your QSO). It is considered bad procedure to "recognize" a breaker (acknowledges his break attempt and then continues in your conversation as if nothing had happened).

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6 DON'T OVER-IDENTIFY: Current FCC regulations require that you give the call of the station you are in contact with followed by your call at the beginning of your QSO, along with giving your call only at ten minute intervals during and at the end of the QSO. Consequently, there is no need to give both station calls at the beginning of each transmission (as is often heard). This over-identification was time during which you could be conversing instead of identifying.

7 ROUND TABLE DISCUSSIONS: A "round table" is a QSO where three or more stations are participating. If you ever get into one, make it a practice to specifically state who should transmit next. Merely

mentioning the name of the next operator, such as "Go ahead, Greg", should suffice. This simple step will prevent "doubling" (when two stations transmit simultaneously) during round table discussions.

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9 UNCOVERED SITUATIONS: Common sense, coupled with good judgment, should cover anything not specifically mentioned. Remember that courtesy and consideration of your fellow operators is usually all that is required for repeater operation to be a pleasure for all concerned.

Priorities

Due to the large number of people using the CFMC repeaters, it is desirable to establish priorities for the various types of communications heard. This is to allow the best service for the greatest number of users. It is recognized that Amateur Radio is a hobby, and as such should not be burdened with too many rules and regulations. But since the primary purpose of the CFMC (and many other) repeaters is emergency and priority traffic, some rules and regulations are necessary.

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the immediate protection of property. Emergencies have absolute priority over all other types of traffic It is for this reason that breaking stations are to be allowed to enter a QSO immediately. All stations should keep the repeater clear until the Emergency traffic has been completed.

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61 NORMAL QSO'S: Situations not mentioned above fall into this category. This is the normal operating mode for all CFMC repeater systems.

QRM & QRN

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One major source of QRM is stolen equipment. Operators of stolen rigs are often characterized by "CB.Lingo", or the use of profanity or other disallowed activities. Should you run across a station operating in such a questionable manner, do not enter into a QSO. Once again, ignoring the QRMer is the best course of action. The prevention of this particular problem is easy to put into action. Never leave your rigs in places where they will be stolen easily such as unattended automobiles.

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