DMR-MARC Best Practice Guide

DMR-MARC is an organization whose sole mission is to assist in the responsible development, deployment and use of DMR technologies in the amateur ranks. Its open membership is comprised of thousands of end-users along with countless repeater and c-Bridge owners. Through its members and by partnering with others, DMR-MARC has developed tools and technologies that today serve as the underlying architecture and framework of the amateur DMR network. All that DMR-MARC provides has been made possible through the donations of both time and money of individuals and companies that share in our beliefs and mission.

DMR-MARC does not belong to one group; it is a network that belongs to all that use it. With this privilege come certain responsibilities. These responsibilities are not codified in a set of rules; rather they are outlined in a set of principles and guides for best practice.

Principles

- DMR-MARC was established to bring DMR technologies to the world's amateur DMR community.

- DMR-MARC is committed to the responsible growth and adoption of DMR technologies.

- DMR-MARC believes that the network and its users should be treated with courtesy and respect. To use this network one must agree to follow best practices in amateur radio and also remember that our network is one of inclusion.

- DMR-MARC believes that spectrum is our hobby's most precious asset. It belongs to all and it must be used and governed efficiently and wisely.

- DMR-MARC realizes that it is part of the broader DMR community and will continuously work with others to develop and deploy new technologies and promote best practices.

Best Practices

User IDs
DMR was developed and deployed primarily for the commercial market. As such, all DMR radios and repeaters require a numeric ID. This ID is not to be confused with a call sign. The ID is unique to an individual and can be used on multiple devices. DMR-MARC developed a numbering scheme, based on the GSM numbering system, for the amateur market. Each ID is unique to an individual and specific to the geography in which the equipment is primarily used. We ask that all amateur DMR users get their ID through the DMR-MARC website at http://dmr-marc.net/contact.html . This ensures that

your ID is in our global database and your information will be contained within each c-Bridge and a variety of third-party applications that use this database.

Audio levels
Inconsistent transmit audio is perhaps DMR's greatest weakness. Until an audio standard is agreed upon or a technical solution is found it is incumbent upon all of us, when able, to adjust our radios to ensure that our audio is consistent with others on the network. When using a radio capable of having its audio adjusted, it is encouraged that each user takes advantage of the audio test meter to understand how their transmission sounds and make adjustments as necessary. By using the online meter along with Talk Group 9999, a user has the ability to do all the testing necessary without interfering with others on the network. Use a Chrome browser and go to http://caldmr.org/listen-now/index.html

Talk Groups—Which one?
There are more than 100 talk groups available to the amateur DMR community. Some serve clubs, some are topic specific and some are geographically based. DMR-MARC currently offers 33 talk groups on a worldwide basis.   In general, DMR-MARC offers talk groups divided along geographic and language specific basis. Historically the geographic talk groups have been limited to the repeater and c-Bridges within a specific region. The reason for this was not to exclude folks from speaking to other regions, rather, they were used as a tool to better manage network resources. This approach has been loosened due to the fact that certain c-Bridge owners were sharing talk groups without authorization and this created a series of other "re-feed" issues for the network overall.

Nearly all DMR-MARC talk groups are available to any c-Bridge. In return we ask c-Bridge operators to obtain the talk groups via a direct connection to one of our CORE servers. We ask that users respect the intended use of the talk group and utilize the systems so that the *minimum* amount of resources are used on each transmission.

Minimal Use is an important concept but what does it mean?

Let's say a user in Europe was looking to communicate with someone in North America, the way to accomplish this would be to use one of the global talk groups, Worldwide Calling or Worldwide English (or other language) Calling. But if this same user was only trying to speak to a friend and both of them had access to their local repeater it might be best to use that repeater's local channel. In the case of making a call to North America on one of the global Talk Groups, the transmission is keying up one timeslot on nearly every amateur DMR repeater in the world. In the case of speaking to a friend on the Local talk group you would be having a conversation but only using one timeslot on one repeater. Although possible, it would not make sense to have the local conversation on the Worldwide Talk Group because you would use far more resources than necessary and those resources would be unavailable to the thousands of other DMR users around the globe. Make sense?

Calling Channels and User Activated Talk Groups

In addition to using the correct talk group based upon your communication needs it's also important to understand that talk groups can be made to work in two different ways as set by your c-Bridge administrator. A talk group can be set to be "always-on" or "user activated." An always-on talk group is exactly that, it is always on and available in your local repeater. A user activated talk group is always available but isn't activated in the repeater until a user turns it on. This is done by selecting the channel and hitting your radio's push-to-talk button. The short transmission activates the talk group for an amount of time, once again, set by your c-Bridge administrator.

DMR-MARC would prefer that our regional talk groups be programmed as always-on and that they be used as "Calling Channels." A calling channel is a talk group whose primary purpose is to make initial contact with another user.

To illustrate this concept let's use the North American talk group as an example. In North America the North American talk group is our network's most used channel, this is because it is set by most c-Bridge administrators as always-on and made available to every repeater on the continent. As a calling channel it should be used when calling out for another user on the network. The goal would be to use this channel to find another user but then take the QSO to one of our user activated talk groups. While short QSOs are not prohibited just remember that this one channel's primary purpose is simply to make contacts.

What does this mean in practice? If, for example, a conversation is taking place with several North American DMR users located in various locations throughout the continent, the North American talk group is a good option—at least to begin with. The conversation might start on North America but if it becomes a prolonged "rag chew" you should move the conversation to one of our user activated channels, UA English 1 or UA English 2. These two channels should be available on every repeater but are only turned on in the local repeater when a user keys them up. So in the case of the rag chew with three or four users all would have access to one of these two channels, but when they keyed them up and turned them on in their local repeater they'd move from using every repeater on the continent to just three or four. Others could still join the conversation or just listen in by keying up one of these talk groups on their local repeater but resources on the remaining repeaters on the network would be available for other uses. Your conversation still takes place and allows others to have one as well.

Our Network
The DMR-MARC network is a network in every respect. It is a group of networked repeaters and a network of enthusiasts. It does not belong to any one group or organization. It belongs to all of us. The DMR-MARC organization works to create guidelines and tools so that the network can continue to grow, remains open to everyone and most importantly is a network we can all use and enjoy. Please use the network responsibly and be positive in encouraging others to do so as well.